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CIMELIA ENTELLINA.

COIN FINDS FROM THE ROCCA D'ENTELLA AND THE COINAGE OF ITS CAMPANI.

REFLECTIONS ON SICILIAN EVENTS IN THE LATE FIFTH CENTURY BC

Suzanne FREY-KUPPER*

Abstract

Two silver coins of Catana found on the Rocca d'Entella, a *litra* of 408(?) and a drachm of 406/405 BC, are published in this contribution for the first time. They are not overstrikes, but silver coins of Catana, Naxos and Rhegium, as well as a single specimen of Athens were used as flans for the production of the first silver coins of the *Campani* in Entella. These were drachms and hemidrachms, so far all from collections or from the market, issued in large quantities in the last decade of the fifth century BC for military purposes by the authorities of the Chalcidian cities in the area of Etna and of Rhegium. Over recent years various studies have been dedicated to these overstrikes taking into account the written sources dealing with the Campanians of Entella, yet their authors have come up with different chronologies.

This article assembles all overstruck specimens, eleven in total. The date of the overstrikes is considered in the light of a new specimen from the market whose undertype is the last issue of Catana before its occupation by Dionysius I in 403/402 BC according to Diodorus (14.15.1-3), yet more likely around 401/400 BC according to the overall context of his account. The conclusion is that, after this event, when Dionysius also granted to the Campanians the city of Catana as their dwelling place (Diodorus 14.15.3), the coins were brought by a group of Campanians to Entella where in 404 BC another group of *Campani* had settled after being released by Dionysius from his service (Diodorus 14.9.8-9). The coins were part of booty or pay only — it is uncertain if ransom money was involved — and were overstruck in Entella. Since both drachms and hemidrachms were produced from two obverse and two reverse dies, the quantity cannot have been very large and may have covered e.g. the pay of a group of 600 warriors engaged for 100 days.

Hemilitra and bronze coins were also produced, the latter from fresh bullion. They are studied and, with the drachms and hemidrachms, discussed within the framework of the other coin finds from the Rocca d'Entella, and of Sicilian coinage issued in the late fifth century BC. Both the metrology of the bronzes (inspired by those of the Chalcidian cities) and the iconography of the horse on all denominations (inspired from Dionysius' gold coins which also inspired the Punic tetradrachms of Jenkins' series 1, latter part) attest to further influence from eastern Sicily. Overall, the coins raise fundamental questions related to the creation of the Campanian community's institutional organisation and on the process of how to equip the city with monetary instruments and use them also as a tool of propaganda.

Keywords: Sicily – Entella – Campani – Dionysius I – overstrikes

Résumé

Dans cette contribution, nous publions pour la première fois deux monnaies d'argent de Catane découvertes à Rocca d'Entella, une litra de 408 (?) et une drachme de 406/405 av. J.-C. Ces pièces n'ont pas été surfrappées alors que pour la production des premières monnaies d'argent des Campani à Entella, des monnaies d'argent de Catane, Naxos et Rhegium, de même qu'un unique spécimen d'Athènes, ont été utilisés comme flans. Il s'agit de drachmes et d'hémidrachmes, provenant de collections publiques ou du marché numismatique, émises en grandes quantités pour des raisons militaires par les autorités chalcidiennes dans les régions de l'Etna et de la ville de Rhegium au cours de la dernière décennie du V^e s. av. J.-C. Durant ces dernières années, plusieurs auteurs ont consacré des études à ces surfrappes, en prenant en compte les sources écrites traitant des Campaniens d'Entella, tout en adoptant des chronologies différentes.

Cet article réunit tous les exemplaires surfrappés, soit onze au total. La date de ces surfrappes est réexaminée à la lumière d'un nouvel exemplaire apparu sur le marché numismatique, qui a pour flan la dernière frappe de Catane avant son occupation par Denys I^{er} en 403/402 av. J.-C. selon Diodore (14.15.1-3), mais plus probablement vers 401/400 av. J.-C. si l'on tient compte du contexte de son récit. La conclusion est qu'après cet événement, lorsque Denys céda aux Campaniens la cité de Catane comme lieu de résidence (Diodore 14.15.3),

ces monnaies furent apportées par un groupe de Campaniens à Entella, où un autre groupe de Campani s'était installé auparavant, en 404 av. J.-C., après avoir été démobilisé par le même Denys (Diodore 14.9.8-9). Ces pièces, qui constituaient une part du butin ou de la solde – il n'est pas assuré qu'il ait été question de rançon – furent surfrappées à Entella. Comme à la fois les drachmes et les hémidrachmes ont été frappés à l'aide de deux coins de droit et deux coins de revers, les quantités émises ne peuvent avoir été importantes et auraient pu correspondre, par exemple, à la solde d'un groupe de 600 guerriers engagés pendant 100 jours. Des hemilitra et des monnaies de bronze furent également produits, ces dernières à partir de métal frais. Elles font partie de l'étude et, avec les drachmes et les hémidrachmes, elles sont replacées dans le canevas des autres trouvailles monétaires de Rocca d'Entella et du monnayage sicilien de la fin du V^e s. av. J.-C. Aussi bien la métrologie des bronzes (inspirée des normes pondérales des villes chalcidiennes) que l'iconographie du cheval figurant sur toutes les dénominations (inspirée, elle, des monnaies d'or de Denys qui ont également servi de modèle aux tétradrachmes puniques de la phase la plus récente de la série I de Jenkins) témoignent d'autres influences venant de Sicile orientale. De manière plus globale, ces monnaies mettent en évidence les questions fondamentales en rapport avec l'organisation institutionnelle de la communauté des Campaniens, et le processus qui aboutit à doter la ville d'instruments monétaires et à en faire usage, entre autres comme outil de propagande.

Mots-clefs : Sicile – Entella – Campani – Denys I^{er} – surfrappes

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1. Introduction

This contribution will focus on two Catanean silver coins of the late fifth century found on the Rocca d'Entella, which have intrigued me for a while¹, not only because silver coins of Catana are extremely rare on sites but also because they are known to have been overstruck by the *Campani* of Entella. Such overstrikes have not been found in official excavations on the Rocca d'Entella so far. All known specimens are from collections and new ones turn up from time to time on the market. Over recent years several articles have been dedicated to these overstrikes taking into account also the written sources – dealing with the Campanians of Entella; all of them with much merit for having gathered new evidence, albeit with different views on chronologies². The aim of this contribution is to bring all the evidence together and to understand when and why the Catanean coins reached the Rocca d'Entella, and how they relate to other evidence we have from the archaeological site³.

I will first look more closely at the coins and their provenance (section 1), secondly at their chronology (section 2), and, thirdly, at the overstrikes and the coinage of the *Campani* in the late fifth century including bronzes (section 3). I will then address the question of when and in what possible political and economic context they were transferred to the Rocca d'Entella (section 4). I will also present a group of Syracusan bronze coins of the dolphin and scallop shell issue found at the Rocca d'Entella which cannot be overlooked in the discussion (section 5). Finally I will offer some thoughts on the iconography of the coins issued by Entella's *Campani* (section 6) and try to put the phenomenon of their coinage in the wider context of Sicilian monetary history (see also section 7, conclusion).

2. The Catana coins and their provenance – occurrence on sites

The two coins in question are both silver, a *litra* and a drachm, minted in Catana in the late fifth century BC (fig. 1):

1. Catana, *litra*, c. 408(?) BC.

D/ Head of Silenus l., bearded and with pointed ear.

R/ (Legend illegible); winged thunderbolt; at l. and r., shield.

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¹ I first presented the coins at a workshop on the Entella tablets organised by Jonathan Prag and Charles Crowther and held at the Centre for the Studies of Ancient Documents, Oxford, 24-25 January 2003. No proceedings were published and since then much new evidence has become available, which I include here. For a short version on the section on the silver coins see Frey-Kupper 2016a.

² See below, section 3.

³ For ongoing help and discussions on the site I would like to thank Alessandro Corretti, Antonino Facella, Chiara Michelini and Maria Adelaide Vaggioli of the Laboratorio di Storia, Archeologia, Epigrafia, Tradizione dell'Antico della Scuola Normale Superiore di Pisa and of course the directors of the excavations, Carmine Ampolo and Andrea Giardina, the successors of † Giuseppe Nenci, who has initiated the investigations on the Rocca di Entella, and Francesca Spatafora, who led the campaigns in the area of the *thesmophorion* in Petrarò. For advice on many aspects I am indebted to Christof Boehringer, the leading expert on Catanean coins, who has been dealing with the thorny questions of their chronology and historical interpretation for many years, and to John Morcom and Keith Rutter, with whom I am preparing *Historia Numorum*³, *Sicily and Adjacent Islands*. For further help, and for permission to illustrate coins I thank Philip Attwood, Wolfgang Fischer-Bossert, Verena Gassner, Angela Maria Manenti, Beat Näf and Christoph Reusser. I am indebted for assistance with the editing of images to Stephan Eckardt (fig. 3.1 and 3.3), Badri Redha (figs 1, 3-5 and 7-9), Max Stöckli, Artmax (figs 2 and 6).

BOEHRINGER forthcoming, Gruppe V, Serie 18 (with dating as given above). The coin is broken and too corroded to allow the identification of the dies; BOEHRINGER 2008, p. 8, pl. 1, 1-6 (for the type).

AR: [0.61] g; 60°; 11.8-12.9 mm W 2/2 C 4/4; Inv. E 3983 ; US 964, 1987.

Broken.

2. Catana, drachm, c. 406/405 BC.

D/ Quadriga galloping r., driven by female charioteer; above, Nike flying l.; in exergue, [KATANAIQN].

R/ Head of young river god l., diademed and with horn above forehead; at l., fish and prawn; at r., fish; above, AMENANOΣ.

BOEHRINGER forthcoming, Gruppe V, Serie 19 (with dating as given above); BOEHRINGER 2008, p. 10-11, pl. 1, 12-13 type; for a specimen from the same pair of dies, see e.g. *SNG ANS* 3, n° 1263.

AR: 4.21 g; 90°; 18.8-19.4 mm. W 1/1 C 4/4; Inv. E 4356; sporadic find, 1985-1994.



Fig. 1 – *Litra* and drachm of Catana from the Rocca d'Entella. Scale 1:1.
(photo Archäologisches Institut der Universität Zürich, S. Hertig)

The first coin (n° 1) was found in US 964 during the 1987 campaign in the area of SAS 9 (fig. 2) on the southern slopes of the central rock massive of the Rocca d'Entella at the south-eastern end of the SE valley traversing the site, that is in front of SAS 3 where the granary is located on the opposite side of the same valley (fig. 6)⁴. This area was settled in medieval times in a part of the site where traces of the ancient settlement of Entella have been documented. US 964 is a layer below the topsoil and includes much medieval pottery but also, as well as our coin, residual pottery of older periods from the archaic period onwards; the layer is located in room III, which was cut into the rock, probably in antiquity⁵. The other coin (n° 2) is a stray find from the area of the ancient site⁶ and, most importantly, the idea that both coins belonged to a hoard can be dismissed.

Thus neither of the coins originates from a stratum relevant to their chronology. Yet, as already mentioned, their presence at Entella is noteworthy. First of all, no single finds of silver coins of Catana have so far been discovered elsewhere in western Sicily. Secondly, the two coins of Catana form an important part among the numismatic finds from the Rocca d'Entella i.e. two out of 164 coins or 1.2% of the total of ancient coins and 8.3% out of the 24 coins of the fifth century BC⁷. This is all the more remarkable as single finds of Catanean silver coins are rare even in eastern Sicily. Thus among the 9,858 ancient coins from

⁴ For the topography and the excavation report see Bejor 1988, p. 1517-1518; US 964 is not mentioned.

⁵ I am grateful to Alessandro Corretti, Pisa, to whom I owe this information. He has supervised the *Tesi di Laurea* by Claudio Maguiaracina on the medieval pottery from that same trench SAS 9.

⁶ No details on the precise provenance are available.

⁷ The 164 specimens exclude illegible coins and coins from tombs (and the necropoleis in general). The 17 coins with three specimens of the fifth century BC from the extramural sanctuary in Contrada Petraro are not included either, see Frey-Kupper 2016b. Yet if they were included, the Catanean silver coins would still make up 1.11% of the total and 7.41% of the specimens dated to the fifth century BC.

Morgantina, c. 73 km or two days walk east of Catana, only one *litra* of our coin type n° 1 was found, that is 0.01% (tab. 1), and none of type n° 2⁸. Taking into account the specimens of the fifth century BC discovered on that site only, this is one out of 329 specimens, i.e. 0.3% (tab. 1). With five specimens, the percentage of the roughly contemporary or slightly later (c. 405-400 BC) bronze coins with head of Amenanos I. and winged thunderbolt⁹ is 1.5% and thus slightly more important, though still modest given the relative closeness of the site of Morgantina to the city of Catana where the coins were minted.

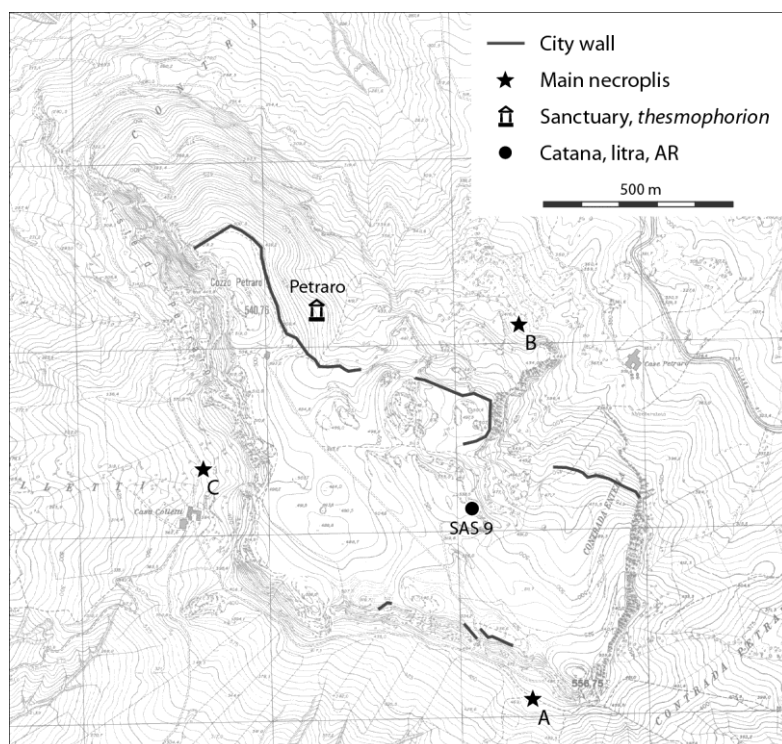


Fig. 2 – Rocca d'Entella, map with the SAS 9 (trench 9) in the central part of the ancient settlement where the Catanean *litra* (above fig. 1.1) was found.

(Graphische Gestaltung artmax.ch and author on a map elaborated by the Laboratorio di Storia, Archeologia, Epigrafia, Tradizione dell'Antico, Scuola Normale Superiore di Pisa)

Overall, silver coins of Catana are 25 times more frequent among the coins of the fifth century BC in Entella than in Morgantina, whereas the geographical distance of the two sites from Catana would lead one to expect the opposite. To this it may be added that single finds of silver coins are rare on ancient sites in general, but that finds of the small *litra*, an indigenous denomination of c. 0.87g, worth $\frac{1}{5}$ of an Attic-Euboic drachm (4.38g)¹⁰, occur on bigger sites. At the Rocca d'Entella a *litra* of Motya of the type 'Gorgoneion / *mtv*' palm tree' (c. 410-405 BC) was found in the area near the medieval castle¹¹ and a *litra* of Selinus 'Nymph seated on a rock / ΣΕΛΙΝΟΕΣ, man-headed bull' countermarked with male head I. (c. 410 BC) came to light in the excavations of the extramural *thesmophorion* in Contrada Petrarò¹². Yet these are *litrai* from western Sicilian cities and thus the presence of an eastern Sicilian *litra* is remarkable, and the drachm even more so.

⁸ Buttrely *et al.* 1989, p. 81, n° 127.

⁹ SNG Lloyd II, n° 917; Buttrely *et al.* 1989, p. 81, n° 128.

¹⁰ On the genesis and compatibility of fractional silver coinage in Sicily see Arnold-Biucchi 2009, esp. p. 50-51; see also Parise 1971.

¹¹ Frey-Kupper 2002, p. 545, n° 1.

¹² Frey-Kupper 2016b, p. 291, n° 14.

Site	n of site finds total	n of Catanean AR	n of 5 th century coins	n of Catanean AR
Rocca d'Entella site <i>intra muros</i>	164	2 (= 1.22%)	24	2 (= 8.33%)
Rocca d'Entella including extramural sanctuary Petraro	181	2 (= 1.11%)	27	2 (= 7.41%)
Morgantina	9,858	1 (= 0.01%)	329	1 (= 0.30%)

Tab. 1 – Catanean silver coins among the site finds from the Rocca d'Entella and Morgantina: number (n) and % among the total of legible coins and among the coins of the fifth century BC from the sites.

Specialists in Sicilian coinage will, however, not be much surprised by the presence of these coins on the Rocca d'Entella since they are aware of the production of drachms by the *Campani* of Entella by overstriking drachms of Catana¹³. As mentioned before no overstruck silver coins have yet been found in official excavations though the minting of the coins must have taken place in Entella since the hemidrachms display the ethnic ENTEΛΛΑΣ.

3. The chronology of the two Catanean coins from Entella

Thanks to the thorough study of the Catanean coins of the classical period by Christof Boehringer chronological clues are available which help to date the coins, first of all in terms of their relative chronology. Boehringer has carried out a full die-study and thanks to the presence of signatures of so-called signing artists on the one hand and to the destruction of the city of Catana by Dionysius I of Syracuse commonly dated to 403/402 BC according to Diodorus (14.15.2-3) on the other, the coins as part of the relative sequence can be fitted into the wider context of Sicilian silver coinage in the last decade of the fifth century. The appearance of the signing artists, traditionally placed around 420 BC¹⁴ is now generally lowered to around 415/413 BC¹⁵, and 413 BC is the date adopted in the following discussion, and also in the forthcoming Sicilian volume of *Historia Numorum*.

As for the drachm, the specimen is from a pair of dies identical to those of 44 other drachms recorded by Boehringer. The reverse die is the last one of the four known combinations, which are all linked to the same obverse die that probably represents the first one of the Catanean drachms¹⁶. The first three of the aforementioned reverse dies are signed by the engraver Euainetos, while the fourth one (of our coin) is not signed. The obverse die with the quadriga in turn is stylistically dependent on obverse dies 12 and 14 of the Tudeer series¹⁷. The first tetradrachm of Catana was also created by Euainetos, and is a further development of the two dies engraved by the artist for Syracuse (likewise Tudeer obv. 12 and 14) with a more vigorously-moving quadriga¹⁸. Taking into account the relative sequence of the coins both in Syracuse and in Catana, a date around 406/405 BC for the drachm is sensible¹⁹.

¹³ See below section 3.

¹⁴ See e.g. Westermarck & Jenkins 1980.

¹⁵ The reassessment is based on how the numismatic data (die-links and the internal organisation of the coinage, style, iconography), the historical data and data from hoards (including wear of coins) fit together; Holloway 1974-1975; Boehringer 2008, 16; see esp. Rutter 2009a, p. 128-129, Rutter 2012 and Canevaro & Rutter 2014 who favour a start date around 413 BC after the defeat of the Athenian invasion. Wolfgang Fischer-Bossert argues in Tudeer & Fischer-Bossert forthcoming, for the beginning around 414 or possibly 415 BC, before the collapse of the Athenian army in Sicily; information from Wolfgang Fischer-Bossert.

¹⁶ Information from Christof Boehringer.

¹⁷ Boehringer 2008, p. 10 (for Tudeer 14); for the hanging bridle of the left-most horse Boehringer (personal information) now inclines to the view that Tudeer 12 is closer to the die of the Catanean coin.

¹⁸ Fischer-Bossert 1998, p. 28-31; Boehringer 2008, p. 12, pl. 2, 18.

¹⁹ See catalogue above according to Boehringer forthcoming.

The dies of the *litra* cannot be identified owing to the corroded state of the coin. Yet they are part of a group of dies that includes two obverse dies linked to each other by three reverse dies; the obverse dies were thus in use at the same time²⁰. They attest the change from omicron to omega in the ethnic of the reverse legend. On the drachms and on the aforementioned tetradrachm the step from the older omicron to the omega in the ethnic has been completed. The *litra* is therefore slightly older and tentatively dated to around 408(?) BC²¹.

Boehringer has convincingly reconstructed the overall evolution of the coinage after 413 BC with an accurate (syn)chronology of the various denominations²². After continuous coin production the mint interrupted its issues of tetradrachms around 413 BC and struck only *litrai* and possibly some fractions of the *litra*. Tetradrachms and drachms were introduced only around 406/405 BC as shown above. Hemidrachms were added slightly later with one coin type issued in alliance with Leontini ('head of Apollo, ΛΕΟΝ / ΚΑΤΑΝΑΙΩΝ, butting bull')²³ and new *litra* types were created²⁴. Finally, and most impressively, at the very end of the production in Catana all denominations but the *litra* were revolutionised with new depictions; the drachm and hemidrachm display a frontal head of Silenus on the obverse and on the reverse a juvenile head in profile inspired by that on the tetradrachm, where that head was first introduced²⁵. This radical change must indeed have taken place when the city's independence came to an end, at the point Catana came under the rule of Dionysius I of Syracuse through betrayal. Diodorus (14.15.1-3) places this event around 403/402 BC. Yet since Dionysius' diplomatic activities in Messana around 399 BC (Diodorus 14.40.1 and 14.44.3) are intimately linked to the capture of Catana and Naxos, a date around 400 BC or maybe a year before is more likely²⁶, and I tentatively adopt it here. I stress this point because this is a firm chronological clue, important to our discussion, as will be shown. This is a fixed date and has to be accepted even by those who would continue to favour an earlier start of the period of the 'signing masters'. In that case the production would be spread over a longer period but still end around 401/400 BC (and anyway around 403/402 BC at the earliest according to Diodorus' date).

4. The coinage of the *Campani*: overstrikes on silver and their chronology – bronze

4.1. Overview

The *Campani* of Entella issued drachms (fig. 3, 1-3) and hemidrachms (fig. 3, 4-5) struck upon coins of other minting authorities (tab. 2). The former are struck on drachms of Catana (fig. 3, 1 and fig. 3,3), on a drachm of Rhegium (fig. 3, 2), and on an Athenian drachm, whereas the latter are struck on hemidrachms of Rhegium and of Naxos (fig. 3, 5). All undertypes date to around the last decade of the fifth century BC (tab. 2)²⁷. I will come back to the overstrikes in more detail.

²⁰ Boehringer 2008, p. 8, pl. 1, 1-4.

²¹ *Ibid.*

²² For this and the following see Boehringer 2008, p. 7-13 and 17.

²³ E.g. London BM 1954, 7, 7, 6; Boehringer 2008, p. 9, n° c, pl. 1, 10.

²⁴ Boehringer 2008, p. 8, pl. 1, 6-7.

²⁵ *Ibid.*, p. 9, n° d, pl. 1, 11 (hemidrachms); p. 11, pl. 1, 16-17 (drachms) and p. 13, pl. 2, 23-24 (tetradrachms). The hemidrachm with frontal Silenus was preceded by a couple of other new types, the second one the above mentioned issue in alliance with Leontini.

²⁶ Beloch 1916, p. 254-260 and Beloch 1923, p. 373; Boehringer 2008, p. 7.

²⁷ Garraffo 1978, p. 29, n° 1-2; Garraffo 1984, p. 133-134, n° 1-2; Garraffo 1988-1989, p. 194, n° A1-2; De Vido 1993, p. 28, figs 5-6; Lee 2000, p. 5-8; Campana 2010, p. 73-77, n° 1-3.

Both the drachm and the hemidrachm issued by the *Campani* bear a prancing horse on the obverse and a helmet on the reverse along with the legend KAMPIANQN. On the obverse of the hemidrachm moreover the legend ENTEΛΛΑΣ appears (fig. 3, 4). A grain of barley is depicted below the horse on the drachm only. The helmet is similar on both denominations; it has a tip on its top, usually described as an *apex*, a device on which to mount feathers, as discussed below (see section 6). Because of the difference between the legends of each denomination and because of the corn grain appearing only on one of them, I think they belong to different issues with the drachm struck first (see also section 4).

There is also a smaller fraction in silver with the same iconography, which thanks to the six pellets above the horse and to its weight (0.25-0.27 g) can be identified as a *hemilitron* (fig. 3, 6)²⁸. Yet no legend is visible on the three specimens of which illustrations are available²⁹, and the horse is prancing to left instead of right except, reportedly, on a variant said to be held in a private collection and for which no illustration has been published to date³⁰. A further difference is that the horse is bridled whereas it is unbridled on the higher denominations and on the bronze. At least two specimens seem to be struck on coins with types that are uncertain³¹. Moreover, they have the peculiarity that the obverse and reverse dies seem to exchange the types compared with the bigger denominations; the helmet is on the obverse and the horse on the reverse. Finally, the helmet is not shown with a simple peak but with a triple device for mounting feathers. The dies were probably cut by a different engraver than those of the drachms and hemidrachms, and the issue may be distinct.

Finally there is also a bronze issue (fig. 3, 7), commonly described as an '*onkia* (?)', again with a prancing horse to right on the obverse and a helmet to the left on the reverse³². These coins match the hemidrachm for the complete legend ENTEΛΛΑΣ on the obverse and KAMPIANQN on the reverse, the latter with the identical separation KA-MPIANQN. They are also stylistically so similar that they must have been issued together. Interestingly, for none of the 16 specimens listed by Campana has an overstrike been observed.



Fig. 3 – Campanian coins: 1.-3. Drachms; 4.-5. Hemidrachms; 6. *Hemilitron*; 7. Bronze (*tetras*).

All silver coins are overstrikes: n^{os} 1 and 3 on drachms of Catana, n^o 2 on a drachm of Rhegium, n^{os} 4 and 6 on uncertain coins, and n^o 5 on a hemidrachm of Naxos. For the undertypes see table 2. Scale 1:1.

(1. Boehringer 20018, pl. 2, 25, 3.86 g; 2. Gemini 6, 2010, n^o 16, 3.98 g; 3. Berk 105, 1998, n^o 126, 3.85 g; 4. NAC P, 2005, n^o 1182, 1.91 g; 5. Syracuse, Museo Archeologico Regionale 'Paolo Orsi', 88267 after Frey-Kupper, 2016a, fig. 3, 3, 1.89 g; 6. NAC P, 2005, n^o 1182, 0.25 g; 7. British Museum, ex Collection John Morcom, ex Astarte Mail Auction 28 Oct. 1999, n^o 250, 1.78g)

²⁸ Manganaro 1999, p. 63-64, pl. 8, 13 (= Campana 2010, 78, n^o 3, 1), 0.26 g; *Numismatica Ars Classica*, Auction P, 12 May 2005, Lot 1181, 0.25g (= Campana 2010, p. 78, n^o 3, 2), 0.25 g; Collection Morcom, ex *Numismatica Ars Classica*, Auction 72, 16. May 2013, Lot 307, 0.27 g.

²⁹ Campana 2010, p. 78 gives KAMPIANQN.

³⁰ Garraffo 1988-1989, 194, n^o A3, weight unknown; Lee 2000, p. 8.

³¹ The last two specimens mentioned in note 28.

³² Garraffo 1978, p. 29, n^o 3; Garraffo 1988-1989, p. 194, n^o A4; Campana 2010, p. 80-84, n^o 4.

4.2. Silver: drachms and hemidrachms

For both the drachm and the hemidrachms two pairs of dies have been identified³³, and all known specimens are struck on coins of the aforementioned mints (Catana, Naxos, Rhegium and Athens). I will now look at the undertypes more closely and at the chronology they imply for the overstrikes.

The undertypes of eleven coins have been identified so far, five drachms and six hemidrachms (tab. 2)³⁴. To the ten specimens hitherto known the hemidrachm of the Pennisi collection in Syracuse (fig. 3, 5) can be added. This is still a modest number, yet interestingly, when more than one specimen is attested per mint and denomination, the coins are all of the same type and in the case of the hemidrachms of Naxos, possibly even from an identical reverse die (see tab. 2).

Salinas had illustrated before 1885 one of the two specimens held in Cambridge struck over a Catanean drachm of our type³⁵ (from an obverse die identified by Boehringer as slightly later in the sequence of dies than the specimen from the Rocca d'Entella³⁶). The overstrike by the *Campani* of Entella was however dated to the period of Timoleon for a long time, e.g. in the second edition of *Historia Numorum*³⁷. Grose suggested in 1916 a date at the end of the fifth century BC, shortly after the Catanean drachms were issued³⁸. This was confirmed by Garraffo who considered a link with the *Campani* engaged by the Chalcidians of Sicily to support Athens in the war against Syracuse in 410/409 BC (Diodorus 13.44.1-2) though he did not exclude the possibility that the coins may be related to the campaigns led by Dionysius I against Catana and Naxos around 401/400 BC since he 'granted to the Campanians the city of the Catanians as their dwelling place' after 'selling the captives he took as booty in Syracuse' (Diodorus 14.15.3)³⁹. In either case (410/409 or c. 401/400 BC) the coins would have been part of the *misthos* paid to the Campanians, in the first instance by the Athenians and in the second by Dionysius.

Between 410/409 and c. 401/400 BC, in 404 BC, Dionysius engaged 1,200 mounted *Campani* to suppress a revolt by Syracusan citizens. Once their mission was successfully completed and Dionysius' sovereignty restored, they were dispatched and, remunerated, moved to Entella (Diodorus 14.9.8-9):

τοὺς δὲ Καμπανοὺς ταῖς καθηκούσαις δωρεαῖς τιμήσας ἐξἀπέστειλεν ἐκ τῆς πόλεως,
ὑπορώμενος αὐτῶν τὴν ἀβεβαιοσύνην. οἱ πορευθέντες εἰς Ἐντελλαν, καὶ πείσαντες
τοὺς ἐν τῇ πόλει λαβεῖν ἑαυτοὺς συνοίκους, νυκτὸς ἐπιθέμενοι τοὺς μὲν ἡβώντας
ἀπέσφαζαν, τὰς δὲ γυναῖκας τῶν παρασπονδηθέντων γήμαντες κατέσχον τὴν πόλιν.

'To the Campanians he awarded the gifts that were due and then dispatched them from the city, having regard to their fickleness. These made their way to Entella and

³³ Lee 2000, p. 4-8 (with no identification of rv. dies for the hemidrachm at the time); Campana 2010, p. 73-77. The obv. of the hemidrachm Pennisi 88267 which is not included in Campana 2010, seems to belong to his obv. 2.

³⁴ The table includes the earliest and the latest bibliographic references as well as the lists by Garraffo 1984. The references to the detailed and careful lists by Lee 2000, p. 4-8 are given in Campana 2010, p. 73-77.

³⁵ Salinas 1867, p. 58, n° 543 var. pl. XXI, 36; the engraving of plate XXI was commissioned by Salinas probably between 1872 and 1885, but published only in 1922 by Ettore Gåbrici in a (rare) posthumous fascicle (8) (Gåbrici also wrote the text on the coin issue just as he did on the other coins in the same fascicle); see the contribution by Boehringer 2016; Grose 1923, n° 2230; Cutroni Tusa 1970, p. 254, n° 1; Garraffo 1978, p. 29, n° 1; Garraffo 1984, p. 133, n° 1b; Garraffo 1988-1989, p. 194, n° A1; Campana 2010, p. 74, n° O1/R1, n° 2.

³⁶ Boehringer 2008, p. 14, who refers to the specimen on his pl. 1, 13.

³⁷ *HN*², p. 137; followed e.g. by Cutroni Tusa 1970, p. 254.

³⁸ Grose 1916, p. 226-227, n° 21, pl. VII, 15; Boehringer 2008, p. 13.

³⁹ Garraffo 1988-1989, p. 196 gives Diodorus' date.

persuaded the men of the city to receive them as fellow-inhabitants; then they fell upon them by night, slew the men of military age, married the wives of the men with whom they had broken faith, and possessed themselves of the city.’

A 410-409 BC date was favoured for the overstrikes by Lee, who adopted a high date for the coins of the signing artists (and hence of the Catanean drachms) and in support of his chronology pointed out that none of the latest coins of Catana were overstruck⁴⁰. He thus hypothesised that the *Campani* arrived on the Rocca d’Entella around 410-409 BC, even though there is no record of the event in Diodorus⁴¹. Boehringer subtly argued that such an early date was improbable since it was unlikely that the city of Rhegium whose coins were overstruck would have contributed to the payment of the 800 Campanians fighting at the side of Athens; Thucydides (6.44.3-4; 6. 46.2; 6.79.2; see also 7.57.11) relates indeed the anxiety of the citizens of Rhegium to be neutral in the war⁴². He also pointed out that these 800 *Campani* (the ‘*oktakosioi*’) were not identical with the 1,200 *Campani* who took Entella in 404 BC⁴³.

Since then new specimens have come on the market and a drachm of the issue with facing head of Silenus on the obverse and head of a juvenile head in profile on the reverse is now listed by Campana as another undertype along with all other known coins overstruck by the *Campani* (fig. 3, 3)⁴⁴. This is the last issue of the drachms of Catana, datable to that city’s last minting period. Catana came under Dionysius’ rule around 401/400 BC⁴⁵, and this date therefore constitutes the *terminus post quem* for the overstrikes.

Mint	Drachm		Hemidrachm		Date of undertype BC
	Reference to type	Reference to specimen	Reference to type	Reference to specimen	
Athens	Head of Athena / AΘE owl (1 specimen)				
	Kroll 1993, p.18, n° 10.	Lee 2000, p. 5, n° 4, 3.78 g.			c. 450’s-404
Rhegium	Lion-mask / head of Apollo r., PHFINON (1 specimen)		Lion-mask / spray of olives with berries, PH (3 specimens)		
	Herzfelder 1957, 122, n° ^{os} 107 or 109, both from rv. die 91.	Campana 2010, p. 73-74, n° 1/1 (here fig. 3, 2).	Herzfelder 1957 125, n° l.	Garraffo 1984, p. 134, n° ^{os} 2a-c (Jameson 562 = Campana 2010, n° 2/1, 2.00 g; Berlin = Campana 2010, n° 2/5, 1.97 g; Syracuse Pennisi = Campana 2010, n° 2/7, 1.99 g).	c. 410-405? (drachm); c. 410-400/399 (hemidrachm)
Catana	Quadriga r., KATANAIQN / head of river god l., AMENANOΣ (2 specimens)				
	Boehringer 2008, pl. 1, 13 (identical obv. die for Grose 1923, n° 2230); SNG Lloyd, n° 906 (identical obv. die for Grose 1923, n° 2231).	Garraffo 1984, p. 133, n° ^{os} 1a-b (Grose 1923, n° 2230 = Campana 2010, n° 1/2, 3.86 g (here fig. 3, 1); Grose 1923, n° 2231 = Campana 2010, n° 1/7, 3.93 g).			c. 406/405?
Naxos			Head of river god l., AΣΣINOΣ / Silenus sitting on rock with cantharus, NAΞIQN		

⁴⁰ Lee 2000, p. 11 and p. 34-36 for the date.

⁴¹ Followed by Campana 2010, p. 70, 73 and 75.

⁴² Boehringer 2008, p. 14.

⁴³ *Ibid.*, p. 15.

⁴⁴ Campana 2010, p. 73-74, n° 4 (= Berk 105/1998, n° 126; 3.85 g).

⁴⁵ See above section 2.

			(3 specimens)		
			Cahn 1944, Group 1, p. 138-140, n ^{os} 115-121 (at least the coin in Syracuse is n ^o 115 from rv. die 93 (as possibly the specimen in Garraffo 1984, n ^o 1d; see Lee 2000, 15).	Garraffo 1984, p. 134, n ^o 1d (priv. coll. = Campana 2010, p. 77, n ^o 2/8, 1.97 g); Romano 1864, 59, n ^o 4 (= ?) Salinas 1867, p. 53; Campana 2010, 77, n ^o 2/6, ? g); Syracuse, Pennisi 88267, 1.89 g (recorded by Fischer-Bossert for his forthcoming SNG volume of Syracuse; here fig. 3, 5).	c. 405-403?
Catana	Head of Silenus facing / male head I. (Apollo?), KATANAION (1 specimen)				
	Boehringer 2008, pl. 1, 16-17 (here fig. 3, 3).	Berk 105, 1998, n ^o 126 = Berk 95, 25.03.1997, n ^o 90 (= Campana 1/4, 3.85 g).			ante c. 401/400

Tab. 2 – *Testimonia* of the currently known undertypes: coins used as flans for producing silver coins of the *Campani* in Entella.

The reverse of at least one hemidrachm of Naxos belongs to the earliest die in the first of Cahn's four groups of coins issued at the end of the city's coinage⁴⁶. Just as happened at Catana, Naxos was taken by Dionysius around 401/400 BC through betrayal and its inhabitants were sold into slavery; moreover the property of the citizens was subject to plunder by the soldiers and the city was razed to ground (Diodorus 14.15.3). 401/400 BC is therefore the *terminus ante quem* for the end of the Naxian coinage but our specimens could be dated around 405 BC or shortly thereafter according to the lower chronology of the signing artists.

The drachm and the hemidrachms of Rhegium belong all to Herzfelder's group V, dated by him to 415/410-387 BC⁴⁷. The reverse die of the drachm seems to be the second one in the sequence of seven reverse dies used for drachms in this group⁴⁸. I doubt that the series runs as late as 387 BC, a date chosen by Herzfelder, being the date of Rhegium's capture by Dionysius (Diodorus 14.111.4). The drachms have the reverse legend PHΓINON with an omicron, used also on the tetradrachms, and thus a date in the fourth century seems unlikely although the omicron might have lasted a few years longer than in the Sicilian-Chalcidian cities⁴⁹. I would place the whole series in the last decade of the fifth century with a possible start date for the series between the years 410 and 405 BC when the die of our specimen could have been produced. It is difficult to be more precise; all we can say is that the last reverse die of the drachms in Herzfelder's group V depicts a head with juvenile traits not dissimilar to those heads produced in the mint of Catana before c. 401/400 BC⁵⁰. The hemidrachms offer no criteria for more precision but fall into the same time span, c. 410-400/399 BC.

⁴⁶ Cahn 1944, p. 138, Group V, R93, pl. VI. This die is linked to the obverse die 73A which continues to be used with the following reverse die R94.

⁴⁷ See also Rutter 1979a, p. 194 and 198-199 for contemporary bronzes; *HN³ Italy*, p. 190, n^{os} 2524-2531.

⁴⁸ Herzfelder 1957, p. 122, n^{os} 107 and 109, both from rv. die R91.

⁴⁹ Fischer-Bossert draws attention to the irregular use of the omicron and the omega in Rhegium's ethnic until after 387 BC when the gen. pl. with omega was firmly established, Tudeer & Fischer-Bossert, forthcoming.

⁵⁰ Herzfelder 1957, p. 125, n^o 114, R96.

The time span of the Athenian drachm with its frozen type, from the 450s to 404 BC, is even wider but still covers the minting period of the other coins which served as undertypes for the coinage by the *Campani* of Entella.

Overall, the range of overstruck types is limited and most coins are dated between 406/405 and 401/400 BC. The latter date forms also the *terminus post quem* for the overstrikes thanks to the overstrike on the Catanean type with facing Silenus⁵¹.

It is interesting, though an argument *e silentio*, that so far no drachm of the Syracusan Leucaspis issue or the associated hemidrachm with quadriga⁵² has been documented as undertype. If these coins were in fact not overstruck, this would be a further element supporting the idea that the overstruck coins were brought from the Chalcidian cities.

4.3. Hemilitra

Not much more can be added to what has already been said about the *hemilitra* (fig. 3, 6). The weights of the three known specimens with horse prancing to left are 0.25, 0.26 and 0.27 g⁵³. This is underweight compared with the theoretical weight of the *litra* (0.87 g). Even if the legend is not visible and the undertype(s) is (are) uncertain⁵⁴, Entella seems to be the most likely mint because of the iconography, and because at least two coins are produced by overstriking.

5. When were the Catanean silver coins transferred to Entella, and when and why were they overstruck?

Our evidence has, to summarise, so far revealed four elements:

- 1) The two Catanean silver coins from Entella which are not overstruck and which constitute unique site finds in western Sicily;
- 2) Silver coins of Catana and Naxos, and of Rhegium and of Athens used as flans to strike coins by the *Campani* of Entella with a *terminus post quem* of c. 401/400 BC;
- 3) The account by Diodorus of two different groups of *Campani* active in the area of the Chalcidian cities: 800 Campanians were involved in war in 410/409 BC, engaged by these cities to aid Athens against Syracuse (Diodorus 13.44.1-2) and other Campanians to whom Dionysius allocated Catana as their dwelling place (Diodorus 14.15.3). The neighbouring city of Naxos which was also taken by Dionysius was plundered by soldiers whose origin is not named.
- 4) Diodorus' account (14.9.8-9) of a different group of *Campani* supported Dionysius in 404 BC to suppress the revolt against him in Syracuse. Once their mission was successfully completed they were richly rewarded and sent away by Dionysius, and then, in the same year, they took possession of Entella (Diodorus 14.9.8-9).

When these pieces of evidence are brought together, the conclusion that the silver coins used for striking the Campanian coins came with the *Campani* to Entella is inevitable. It also seems obvious that at least the coin of Catana providing the *terminus post quem* of c. 401/400 BC can only be related to the events of that year mentioned by Diodorus (14.15.3). The question however is whether all coins we have came in one block to Entella or if they trickled there

⁵¹ The 410-409 BC date proposed for the overstrikes by Lee 2000, 34-36 can therefore be safely ruled out.

⁵² *BMC Sicily*, p. 169, n^{os} 162 and 164; *SNG ANS Sicily* III, n^{os} 308-313.

⁵³ See above note 28; no weight is available for the variant mentioned with horse r., see note 30.

⁵⁴ See above section 3.1. It is not sure, if *hemilitra* of the older type of Entella, 'head of Heracles l. / six pellets, ENT' (*BMC Sicily*, p. 60, n^o 3 (0.29 g); Campana 2010, p. 78) have served as flans as proposed by Manganaro 1999, p. 64.

slowly thanks to contacts between *Campani* on either side of the island⁵⁵, and, in either case, whether they were overstruck at once or over a longer period.

As for the first question, the homogeneity (a) of the coins overstruck (most coins date roughly to between 406/405–401/400 BC), (b) of the mints overstruck (Catana and Naxos from the north eastern coast of Sicily, Rhegium and one Athenian coin), and (c) of the denominations (drachms and hemidrachms) (tab. 2) – favour rather the model of a single movement. The fact that no single coins have been found elsewhere points to a similar conclusion. Moreover the overstrikes are all from two pairs of dies each for the drachms and hemidrachms and thus make the striking of the coins over a longer period unlikely. To this has to be added that all known specimens of the drachms and hemidrachms are restruck on coins and none on flans produced from fresh bullion. Finally the last coin among the undertypes (Catana, *ante* 401/400 BC) seems to have been struck with the first obverse die⁵⁶.

Whether the idea of a single movement or a transport by many individuals as pay or booty over a short time is correct, it is more likely that this happened around 401/400 BC or shortly thereafter rather than in 404 BC. If this is correct, the coins are the only source for individuals moving from the Chalcidian cities to Entella around 401/400 BC. It is uncertain whether these coins were pay or booty, and, if the former applies, whether the coins result from money Dionysius collected for ransom of people freed from slavery.

The fact that coins of Catana were lost in ancient Entella and were not overstruck shows that they circulated as such. This raises the question how the coins were collected before they were overstruck. It is possible that they first circulated and were collected by the *polis* only after a while and single coins such as ours could be specimens lost before the collection, although all this is uncertain.

At this point it is worth considering the denominations. The range of denominations includes mainly drachms and hemidrachms with a few *hemilitra*. Compared with the overwhelming wealth of tetradrachms issued in most of the major mints in archaic and classical Sicily, drachms are rather rare. This denomination was, however, introduced at an early date by the Chalcidian cities Himera (540/530–515 BC), Naxos and Zancle (525–510 BC), Rhegium (c. 510 BC) (on the Corinthian standard), and by the Dorian Selinus (550–525 BC) (on the Attic standard)⁵⁷; it was initially limited to the coinage of those cities. Issues of drachms were again struck by Himera and Naxos, and by Messana following Zancle, in the fifth century when other mints start issuing drachms, e.g. Leontini, Gela and Syracuse. The most abundant production of drachms takes place, however, in the last decade of the fifth century BC and, from this time only, drachms are accompanied by hemidrachms. Syracuse produces the rich series of drachms with Leucaspis and of the hemidrachms with galloping quadriga⁵⁸, Selinus resumes the production of these denominations for the first time after the sixth century BC⁵⁹, and other mints, such as Camarina, strike them for the first time in the years 413–405 BC⁶⁰. Catana has probably the most prolific production of drachms, accompanied by hemidrachms⁶¹ while Naxos at this time produced hemidrachms only⁶². The production of both

⁵⁵ For criteria to identify block transports see Frey-Kupper & Stannard forthcoming.

⁵⁶ The die study of overstruck coins is difficult since the details of the coin picture are often distorted. In the case of this coin the left side of the corn-grain seems to be incomplete because of the satyr head of the undertype. Campana 2010, p. 73, n° 1/4 puts a question mark against his tentative attribution to obverse 1, but his attribution is probably correct, as he is with the attribution of the reverse to reverse die 1.

⁵⁷ Fischer-Bossert 2012, p. 143. The dates are those elaborated by N.K. Rutter for the forthcoming volume of *Historia Numorum. Sicily and Adjacent Islands*. For Rhegium see, *HN³ Italy*, p. 187, n° 2468.

⁵⁸ See above note 52.

⁵⁹ *BMC Sicily*, p. 141, n° 38 and p. 143, n° 48.

⁶⁰ Westermarck & Jenkins 1980, p. 205–206, n° 167–168 and p. 207, n° 169.

⁶¹ Boehringer 2008, p. 8–11, see above section 2.

⁶² Cahn 1944, Group 1, n° 115–121, see above section 3.

denominations by Rhegium described above falls in the same period 410-400/399 BC or shortly before.

The production rather coincides with the period of conflicts between Syracuse and the Chalcidian cities than between Athens and Syracuse and it was a period when the protagonists had to hire and to pay mercenaries.

There are no references to the drachm in terms of pay in Diodorus' work but the drachm as the daily pay for Athenian mercenaries is mentioned by Thucydides 7.27.2, referring to summer 413 BC and to Thracian peltasts. One drachm per day was also promised by Tissaphernes to his men as a day's pay but the fact that he proposed only half of the amount – 3 obols (half a drachm) for the future 'until he should ask the king' – shows that wages were subject to changes and negotiation (Thuc. 8.29.1, referring to winter 412/411 BC)⁶³.

Thus it seems obvious that the *Campani* reused the coins they were familiar with and were in possession of to strike their own coins. The *hemilitra* which they struck, being half of the indigenous *litra*, were probably used for small change, not only because they were compatible with the *litra* which were circulating everywhere in Sicily and which were produced in many mints along with drachms and hemidrachms, but also to produce smaller change since one drachm was worth 5 *litrai* and a hemidrachm 2½ *litrai*. On the other hand no *litrai* seem to have been overstruck, although the *Campani* must have brought Catanean *litrai* with them, as attested by the specimen from the Rocca d'Entella. My guess is that the *Campani* may have brought only a small quantity of *litrai* with them, since they were probably paid in drachms and hemidrachms, and that they felt it was not worth striking their own *litrai*, and that enough other *litrai* from other mints were circulating, a fact which seems to be confirmed by the evidence from the Rocca d'Entella⁶⁴, and Entella had of course produced its own *litrai* before the *Campani* arrived⁶⁵.

Finally the amount of silver struck by the Campanians cannot have been very substantial. With both the two obverse and reverse dies c. 40,000 drachms could have been struck, if we take an average of 20,000 per die⁶⁶. By adding the same number for hemidrachms a total of c. 60,000 drachms would result, if the dies would have been fully used. This would correspond to the pay of a group of 600 warriors employed for 100 days. We do not know if the dies were used to their end, but the figures may highlight that the sum of money involved was not very large.

The question is then why the coins were overstruck at all, and the answer is that this was the most obvious and efficient way for the Campanians to produce their own coinage based on the denominations they were familiar with⁶⁷. Moreover, this allowed them to affirm their own power over the city they had taken. In this regard it is interesting to note that the drachms bear only the ethnic KAMPIANQN and are lacking the legend ENTEΛΛΑΣ, which appears only with the hemidrachms. I suppose that they started with the production of the drachms and added the hemidrachms as a separate issue in a second step, though probably almost immediately thereafter. The bronzes are almost identical both in style and for the arrangement of the legend as we have seen. I will discuss these in the following section.

⁶³ For rates of pay there is epigraphic evidence, e.g. from Eleusis and Acropolis, see Loomis 1998, p. 233-234; Silver 2006, p. 257, note 1.

⁶⁴ See above, notes 11 and 12 on the *litrai* of Mozia and Selinus.

⁶⁵ Female figure standing l. / man faced bull standing r.; in exergue, small fish; above ENTEΛΛAIN, between legs QN; Cavallaro 1956, p. 40-41, pl. I, 4-8.

⁶⁶ This is the average which is frequently adopted for silver coinages although higher or lower figures (30,000 dies or 10,000 dies) are also used; see de Callatay 2005, p. 77-79; de Callatay 2011, p. 9. Canevaro & Rutter 2014, p. 7-8 used all three figures to calculate various possible outputs of coins in the period of the signing artists.

⁶⁷ Arnold-Biucchi 1996, esp. p. 54-55 on the motivations for overstrikes; see also Meadows 2009, considerations on *epichorion nomisma*.

We do not know whether a certain amount of non-overstruck coins from the Chalcidian cities was returned with some warriors to Italy⁶⁸. There is no evidence in the sources that this was the case. If some coins reached Italy, however they were probably melted down, not only because there is no find evidence from Italy but also because the denominations did not fit with the metrological system of the Italian mainland, based on the stater at the time. On the other hand I wonder whether a triobol of Poseidonia (Paestum) found during the recent excavations of the extramural *thesmophorion* in Contrada Petraro on the Rocca d'Entella (fig. 4)⁶⁹ could be related to the presence of the *Campani*. It is the only small silver coin of Poseidonia ever found in Sicily⁷⁰. The triobol is dated to the period 455-440 BC; because of its rarity and since the coin is worn and hence was circulating for many years I do not exclude this possibility.



Fig. 4. Poseidonia, triobol, c. 455-440 BC from the extraurban *thesmophorion* in Contrada Petraro. Scale 1:1. (Photo Archäologisches Institut der Universität Zürich, S. Hertig)

6. Bronzes

6.1. The bronze of the *Campani*

The resemblance of the hemidrachms (fig. 3, 4-5) and of the bronzes (fig. 3, 7) is in fact so close that they must have been simultaneously issued. Yet, unlike the hemidrachms, the bronzes are not overstruck and seem to have been produced from flans specially cast for this purpose. The coins are usually called *onkiai*; Garraffo first proposed this denomination⁷¹; because of the small size and the low weight of the coins accessible to him he assimilated them to *onkiai* of the late fifth century BC, especially of Nacona⁷². Campana follows Garraffo for the denomination but opts for the late series of Segestan *onkiai* of Bérend's series 33 and 42 (c. 410-400 BC) as a metrological reference (average 2.21 g and 2.18 g)⁷³. This weight is indeed close to the average weight of 1.99 g calculated from 18 specimens of Entella⁷⁴. An alternative possibility would be the weight standard of the *tetrantes* in use by Leontini and Catana before c. 401/400 BC, established by Boehringer as 1.90 g for his lighter series A and 1.93 g for his heavier series B of Leontini and 1.75 g for Catana⁷⁵. The standard of the heavier *tetrantes* of Leontini seems to be close to that of the coins of Entella. There is no proof for

⁶⁸ Rutter 1979b, p. 99.

⁶⁹ Frey-Kupper 2016b, p. 286-287 and 291, n° 12; 402, fig. 38, 12. The triobol is type Libero Mangieri 2006, p. 34, n° 74

⁷⁰ The two other instances of coin finds from this mint, are from hoards: a drachm of c. 530-500 BC from the archaic hoard in Selinus (Arnold Biucchi, Beer Tobey & Waggoner 1988, p. 4, n° 3; *CH* VIII, p. 5, n° 35); and from a purse, eleven staters of 475-460 BC from tomb W738 in Himera (Boehringer, Brousseau & Vassallo 2011, p. 25-26).

⁷¹ Garraffo 1978, p. 29, n° 3 knew only two specimens (Agrigento, private collection, 1.75 g and Naples, Fiorelli n° 4155, 1.55 g); Garraffo 1988-1989, p. 194, n° A4 mentions Gàbrici 1927, p. 129, n° 5, 1.77 g (here adding a question mark: '*onkia*?').

⁷² Garraffo 1978, p. 41.

⁷³ Bérend 1979, p. 71, n° 33 and Campana 2010, p. 78, fig. 17 (3 coins, avg. 2.21 g; σ 0.34 g) and p. 73, n° 42; Campana 2010, p. 78, fig. 18 (6 coins, avg. 2.18 g; σ 0.12 g).

⁷⁴ This is the average weight obtained from the 17 specimens assembled by Campana 2010, p. 80-84, to which I add the specimen from Garraffo 1978, p. 29, n° 3 (private collection, Agrigento).

⁷⁵ Boehringer 1979a, p. 146-156 and p. 156-158.

either of these views, but my feeling is that the bronzes of Entella which were created by a group of Dionysius' mercenaries coming from eastern Sicily are more likely to be inspired by the standard of the mints of the east coast of Sicily than by Segesta's old fashioned *onkiai*. This is however a view which should be tested against further evidence. In order to do so, I will look now at earlier bronzes found on the Rocca d'Entella.

6.2. The coins of the 'female head / dolphin and scallop shell' issue of Syracuse from Entella and the pre-Campanian 'female head / bearded male head with *taenia*' of Entella.

Among the 24 coins of the fifth century BC from the Rocca d'Entella is a group of five coins of the Syracusan issue 'female head / dolphin and scallop shell' (fig. 4, 3-7)⁷⁶. The findspots of three coins are shown in figure 5: two specimens were retrieved from an upper layer (topsoil) in SAS 3/30 near the granary, one coin is a sporadic find collected in 1994 *extra muros* on the north-east of the site; the two remaining coins are sporadic finds of uncertain provenance⁷⁷. These coins are part of an issue that must have been introduced shortly before 405 BC and possibly overlap with the slightly earlier issue 'female head / wheel of four spokes with dolphins in the lower quarters' (fig. 5, 2)⁷⁸. The latter in turn is preceded by the issue with *quadratum incusum*⁷⁹ and the issue with octopus (fig. 5, 1)⁸⁰. Both the wheel issue and the issue with dolphin and scallop shell display names of signing artists on the obverse: (KIM(ΩN), ΦPY and EV for the former and ΦPY, EV and IM for the latter which show that their production started during their activity with names overlapping (ΦPY(ΓΙΛΛΟΣ) and EV[])⁸¹. Both issues occur in the 'Ex scalo ferroviario' excavation in Gela complemented by *triantes* and *onkiai* of the older octopus issue in a destruction layer which the excavators put into relation with the Carthaginian assault of 405 BC (13.108-111.2)⁸². If the destruction indeed reflects the events of 405 BC, the layer provides a *terminus ante quem* for the circulation of both issues together. The coins of the latter issue with dolphin and scallop shell are struck on flans from an open cast mould, mostly with remnants of the casting channel (fig. 5, 3-7). They may have been struck for a period after, possibly until 390/380 BC⁸³, but that is yet to be confirmed with the help of archaeological contexts.

⁷⁶ For the type see Gàbrici 1927, p. 172, n^{os} 34-43.

⁷⁷ SAS 3/30: E 4381 (US 30001, sector E, 2.65 g, 75°) and E 4763 (US 30001, NW trench, 2.34 g, 225°); sporadic find 1994: E 3704 (2.39 g, 30°); sporadic of uncertain location: E 3901 (2.81 g, 285°) and E 4352 (2.47 g, 295°).

⁷⁸ E 6707 (1.54 g, 120°), see Frey-Kupper & Weiss 2010, p. 98, n° 1, 243, fig. 90.1. For the type see Gàbrici 1927, p. 171, n^{os} 19-26; for the chronology Boehringer 1979b, p. 21; Frey-Kupper & Weiss 2010, p. 92.

⁷⁹ For the type see Gàbrici 1927, p. 171-172, n^{os} 27-31.

⁸⁰ E 4350 (3.13 g, 75°). For the type see Gàbrici 1927, p. 171, n^{os} 1-10; for the chronology of both types Boehringer 1979b, p. 19-20.

⁸¹ *Ibid.*, p. 21. In addition to the signatures mentioned there, see Calciati 1986, p. 56, n° 24 fr 1 for ΦPY on the dolphin and mussel issue. Phrygillos corresponds to Tudeer 47.

⁸² Carbè 1993, p. 56, n^{os} 57-59 (dolphin above scallop shell issue); p. 56, n° 56 (wheel issue).

⁸³ See also Boehringer 1979b, p. 21 who assumes for the dolphin and mussel issue a considerably longer period than for the wheel issue. I do not exclude a date until at least the 390/380s BC for the feature of the flan the issue has in common with the imitations of the issue with female head and sepia abundantly found in contexts of the fourth century BC in Mozia; Mammina 2002. For lists according dated contexts see Frey-Kupper 2013, p. 529-532. The issue seems to be absent in Selinus destroyed in 409 BC and not long afterwards reoccupied (for a detailed discussion of the reoccupation, see Mertens 2006, p. 421-424; Helas 2011, esp. 36); remarkable concentrations of the issue in Himera have been recorded by Tusa Cutroni 1976, p. 721-722, n^{os} 20-31; p. 750, n^{os} 346-357 and may be related to a later occupation of the settlement after the destruction of 409/408 BC, see Boehringer 1978, p. 54.

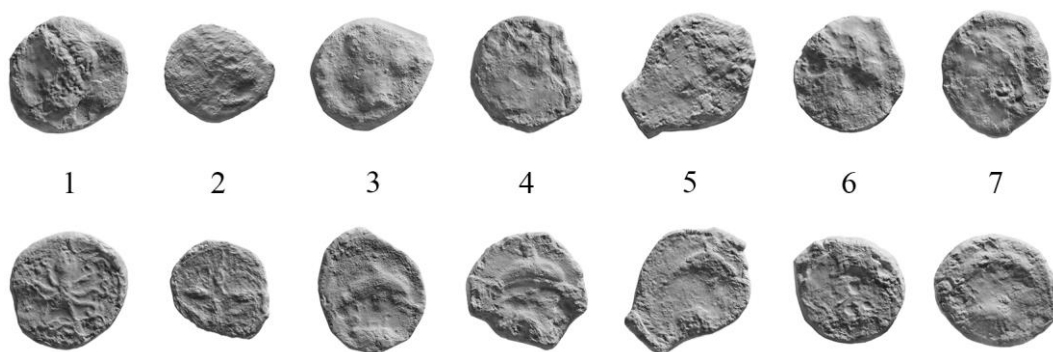
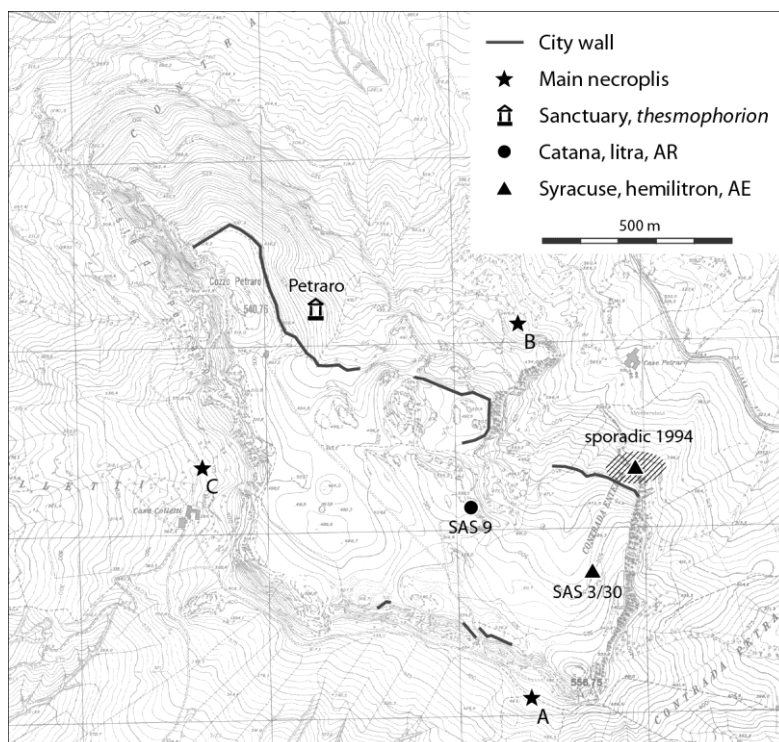


Fig. 5 – Syracusan bronzes of the late fifth century from the Rocca d'Entella.

1. *Tetras*, 'female head / octopus', c. 410-405 BC; 2. *Hemilitron*, 'female head / wheel of four spokes with dolphins', c. 405 BC / shortly before; 3.-7. *Hemilitron*, 'female head / dolphin above scallop shell', c. 405-390/380(?) BC. Scale 1:1. (Photo Archäologisches Institut der Universität Zürich, S. Hertig)

The group of five coins is most unusual and unparalleled even in the eastern Sicilian site of Morgantina, where none have been found. Six specimens have however been documented from Gela and two from Camarina, both destroyed in 405 BC⁸⁴. Only one coin has been recorded among the finds from the central Sicilian sites studied by Sole⁸⁵ and none at Monte Iato. Since they are absent or rare in eastern and central Sicily Morgantina, they may reflect some privileged contacts if not with Syracuse, then with eastern Sicily. If this is correct they could have been brought by a group of Campanians either around 401/400 BC or shortly thereafter, or in 404 BC. Yet we do not know precisely when the coins reached the Rocca d'Entella after their issue shortly before 405 BC or slightly later.



⁸⁴ Puglisi 2009, p. 322, with a full list of occurrences.

⁸⁵ Sole 2012, p. 202, n° 73 from Monte Sabucina.

Fig. 6 – Rocca d’Entella, map with the SAS 3 (trench 3) in the central part of the ancient settlement and the area *extra muros* (sporadic 1994) where the Syracusan *hemilitra* of the female head / dolphin above scallop shell issue (above fig. 5.3-7) were found.

(Graphische Gestaltung artmax.ch and author on a map elaborated by the Laboratorio di Storia, Archeologia, Epigrafia, Tradizione dell'antico, Scuola Normale Superiore di Pisa)

The dolphin and mussel issue is also interesting for its stylistic, metrological and technical affinities with the issue ‘female head with *amphyx* and *sphendone* l. / ENTEA, bearded male head with *taenia* r.’ of Entella (fig. 7, 5-6)⁸⁶. No finds of the latter issue have been so far recorded among the finds from the Rocca d’Entella. As for the style, the obverses of the Syracusan and the Entellan coins display a head with the hair bound in a *sphendone* and fixed by an *amphyx* (headband), sometimes wearing earrings; often with a sprig of laurel or olive behind the head on the Syracusan coins. Compared with the slightly older wheel issue (fig. 7, 1-2), where the head is depicted larger and in a more compact manner, the throat of the head on the dolphin and mussel issue (fig. 7, 3-4) and of the issue of Entella (fig. 7, 5-6) is longer and thinner and the relief of the image is less plastic.

The weight of the Entella issue is between that of the two Syracusan issues, and possibly closer to the dolphin above scallop shell issue (tab. 3) with which it also shares the technique of the flan. The flans are from an open cast mould often retaining the characteristic remnants of the casting channel. If the issue of Entella is indeed derived from the Syracusan dolphin above scallop shell issue, it is firmly dated to shortly before or around 405 BC. Moreover its inspiration from the Syracusan issue would be a precedent for that of the suggested adoption by the *Campani* of the eastern Sicilian weight standard of Leontini (see above section 5.1). If our chronology of the Entellan issue with female and male is correct, the Campanian bronze issue is only slightly later.



Fig. 7 – Bronzes of the late fifth century BC.

- 1.-2. Syracuse, *hemilitron*, ‘female head / wheel of four spokes with dolphins’, c. 405 BC or shortly before;
- 3.-4. Syracuse, *hemilitron*, ‘female head / dolphin above scallop shell’, c. 405-390/380(?) BC;
- 5.-6. Entella, *hemilitron*, ‘female head / male head’, c. 405(?) BC (coins slightly enlarged).

(1. British Museum, 2013,4030.1325 (= *SNG John Morcom*, n° 683), 2.85 g; 2. Vcoins 2016, 3.35 g; 3. Vcoins, 2016, 3.46; 4. CNG on ebay June 2001, 3.26 g; 5. British Museum, ex Collection John Morcom n° 580, 3.90 g; 6. Classical Numismatic Group e-auction 129, n° 28, 3.66 g)

⁸⁶ Gåbrici 1927, p. 129, n° 8-9; *SNG John Morcom*, n° 580 (= our [fig. 7, 5](#)).

Mint	Issue	Gàbrici 1927	Average weight	Standard deviation σ	Number of specimens
Syracuse	Female head l. / wheel with dolphins	171-172, n ^{os} 27-31	3.73 g	0.47 g	139
Syracuse	Female head l. / dolphin above scallop shell	172, n ^{os} 34-43	3.25 g	0.37 g	155
Entella	Female head l. / male head r.	129, n ^{os} 8-9	3.42 g	0.41 g	40

Tab. 3 – Weights of the issues illustrated in fig. 7; average weights, standard deviation σ and number of specimens. (Figures recorded for *Historia Numorum*³, Sicily and Adjacent Islands)

7. Iconography

In this section I will look more closely at the iconography of the Campanian coins of Entella to investigate its origin and meaning. In doing so I will also try to understand whether the coin types provide elements that complement the information on the chronology gained independently from other clues such as the overstrikes and weights.

7.1. Obverse: the horse

As for the horse, Garraffo has stressed its connection with the Campanians as ἵππεῖς (Diodorus 13.44.2 and 14.9.2)⁸⁷. This might be correct but the horse appears unbridled just as the horse on Dionysius' gold coins. It is a 'free horse' and may be a more general symbol for wealth of social elites. Considering that the horse is depicted on the 10 drachm (50 *litrai*) pieces of Dionysius' gold coinage of c. 405-400 BC (fig. 8)⁸⁸ it is hard to imagine that this coin of such *renommé* and purchasing power with its issue largely overlapping that of the *Campani* would not have inspired the *Campani* who had been serving under Dionysius. The depiction on both coinages is also very similar. On the Campanian hemidrachms and bronzes just as on the Syracusan coins the horse is cantering right above an exergue line with the hind legs at some distance from that line. I have attributed these two denominations to the same production period (see sections 3.1 and 4). No line is visible neither on the drachm nor on the *hemilitra* which both seem to have been issued separately (sections 3.1 and 4).

A similar free horse is depicted also on the Punic tetradrachms with the legend QRTHDŠT on the obverse and the palm tree and the legend MHNT on the reverse; it appears on the obverse and is crowned with a wreath by a flying Nike (fig. 9). These tetradrachms belong to the latter part of Jenkins' series 1 which starts with a forepart of a horse on the obverse⁸⁹. The coins with the horse forepart include 10 obverse and 37 reverse dies and those with the whole horse 2 obverse and 10 reverse dies with one of them (R33) linked to the issue with the horse forepart. There is a firm chronological clue thanks to the overstrike of an Acragantine tetradrachm on a specimen with the horse forepart from the third obverse die. The destruction of Agrigentum in 406 BC provides a *terminus ante quem* for the overstrike and hence for the issue with the horse forepart which in turn may have circulated for a few years before it was used as flan for a new tetradrachm by the citizens of Agrigentum. Jenkins retained 410 BC as the most appropriate start for the production of series I, in the context of the preparations around 410 BC to the war against Selinus in 409 BC⁹⁰. For the end date he proposed 392 BC, the period following Mago's expedition to Messana in 393 BC, which is also in line with the hoard evidence⁹¹.

⁸⁷ See e.g. Garraffo 1978, p. 39.

⁸⁸ Bérend 1993, p. 132-140, pl. X.

⁸⁹ Jenkins 1971, p. 28-30 and p. 35-38, n^{os} 1-37, pl. 1-4.

⁹⁰ *Ibid.*, p. 24-25.

⁹¹ *Ibid.*, p. 23.

No date has been discussed for the change from the issue with the forepart of the horse to the whole horse. The key to assessing this is the strange feature of the Punic legend QRTHDŠT on the central line of three that form the exergue line on the obverse below the horse cantering l. (fig. 9, 1). The letters are tiny, which is unusual compared with those on the earlier issues with the horse forepart. Yet precisely the same layout of letters occurs on the early issues of Dionysius' 10 drachm gold coins (fig. 8, 1). They have the odd peculiarity of displaying the same legend ΣΥΠΑΚΟΣΙΩΝ both on the obverse and on the reverse. On the obverse the letters are arranged around the head, clockwise starting from the neck. On the reverse the tiny letters of the legend are squeezed between the two exergual lines. This layout of the legend was employed on four consecutive reverse dies (Bérend's dies R1-4)⁹² and it is abandoned on the fifth die (R5)⁹³ where it is replaced by a double line without legend (fig. 8, 2) to reappear on the sixth die (R6)⁹⁴. The five dies with the legend between a double-line are attested by 161 specimens assembled by Bérend. In the Punic series the obverse with the double-line exergue is confined to one obverse die (Jenkins' die O11, fig. 9, 1) which Jenkins was able to document from three specimens⁹⁵. On the obverse die O12 with horse cantering r. a double-line without legend appears (fig. 9, 2), just as on the Syracusan die R5. The evidence points to a layout of the Punic legend on the model of the Syracusan legend rather than *vice versa*⁹⁶, which is followed by a double line likewise inspired by Dionysius' gold coinage. The conclusion that Greek die engravers acquainted with the habits of the Syracusan mint were at work⁹⁷, who quickly reacted to changes⁹⁸ there is hard to avoid. This is something I will discuss elsewhere in more detail. Here I will only add that if our conclusion is correct, the coinage of Dionysius provides a *terminus post quem* for the Punic coins with free horse, which can therefore be dated to 405 BC at the earliest. This in turn is a *terminus post quem* for the adoption of the horse by the Campanians of Entella, well in line with the date provided by the overstrikes. It is difficult to know whether the adoption of the horse on the coinage by the *Campani* is based on the Syracusan or on the Punic prototype. I would argue that the *Campani* who were in Dionysius' service for some years knew his coinage and may have taken it as a source of inspiration for the types of their own coinage. Yet, Punic tetradrachms with the free horse were in circulation in western Sicily and hoarded not far from Entella⁹⁹, while the hoard of San Vito Superiore attests to hoarding in southern Italy¹⁰⁰.

⁹² Bérend 1993, p. 132-139, n^{os} 1-11.

⁹³ *Ibid.*, p. 139-140, n^o 12.

⁹⁴ *Ibid.*, p. 140, n^o 13.

⁹⁵ On a fourth specimen the same obverse die is altered and worn, and the legend between the lines is worn away; Jenkins 1971, p. 39, n^o 40.

⁹⁶ Similarly on the grounds of considerations of the relative chronology Frey-Kupper 2014, p. 97.

⁹⁷ Jenkins 1971, p. 30 pointed already out the Greek style though only of the issue coined with O12.

⁹⁸ Parallels for a quick reaction of die engravers to prototypes, see e.g. above section 2; Fischer-Bossert 1998, esp. p. 28-31 (Catana derived from Syracuse) and Tudeer 1913, p. 143 and p. 261-262; Fischer-Bossert 1998, p. 27 (Selinus and Syracuse).

⁹⁹ *IGCH*, p. 320, n^o 2119; see Tusa Cutroni 1956, p. 208; Tusa Cutroni 2001 (with a *caveat* on the attribution of a mint based on hoards); see also Facella 1999.

¹⁰⁰ *IGCH*, 281, n^o 1910.



Fig. 8 – Syracuse, Dionysius I, 10 drachm (50 *litrai*) gold coin, c. 405-400 BC.

1. Goldberg, Auction 72, 3-6 Feb. 2013, n° 4025, 2.88 g (from Bérend's D2 and R2 dies); 2. London, British Museum, *SNG Lloyd*, n° 1424, 2.90 g, 180° = BÉREND 1993, 139, n° 12, 6 (D4/R5, this coin). Scale 2:1.
(1. British Museum; 2. <https://www.sixbid.com/browse.html?auction=623&category=13770&lot=624533>)



Fig. 9 – Carthaginian mint in Sicily, c. 405-400 BC.

1. London, British Museum, BM 1867,1109.49 (*PCG* III.C.40), 16.80 g = JENKINS 1971, 38, n° 38, 2 (this coin from obv. die O11); 2. London, British Museum, BM RPK, p.220 A.4.Pun, 17.16 g = JENKINS 1971, 39, n° 44, 4 (this coin from obv. die O12). Scale 1:1.
(1.-2. British Museum)

On the Campanian drachm just below the horse appears a big grain of corn (fig. 3, 1-3). Too much emphasis has been put on this corn grain, and it was used to claim an early date (410-409 BC) for that drachm¹⁰¹ since a corn grain is depicted also next to the forepart of a horse on the earliest tetradrachms of the Siculo-Punic QRTHDŠT series¹⁰² and because a whole prancing horse is depicted on the later tetradrachms of that series (fig. 9)¹⁰³. Yet as we have seen such an early date can be ruled out for the Punic issue with the whole horse and a corn grain is also displayed on Dionysius' gold coins (fig. 8, 2); it appears on the fourth obverse die in the sequence of the five known obverse dies. The last obverse die (D5) is linked to a new reverse die (R6), which is the last one of six dies. In her thorough die study Bérend has

¹⁰¹ Lee 2000, p. 34-36, 41 and 45, followed by Campana 2010, p. 70-72.

¹⁰² Jenkins 1971, p. 35-38, n°s 1-37.

¹⁰³ *Ibid.*, p. 39-40, n°s 38-48.

documented many specimens for each obverse and reverse dies except for D3, but only seven specimens for the combination of the last two dies (D5 and R6). I therefore suppose that it was used for a very short time at the end of the issuing period, around 401/400 BC and that obverses 3 and 4 were used around the middle of the period 405-400, c. 404/403-402/401 BC. This again fits the chronology of the Campanian overstrikes. Yet, a corn grain is also depicted on other coins, especially of Leontini, on all denominations from the tetradrachms down to the bronzes¹⁰⁴. The corn grain on the drachms of Entella is therefore not necessarily derived from that of the Punic tetradrachms. It could well be inspired by the coins the Campanians had seen circulating in Syracuse or in the Chalcidian cities from where they not only took the coins they overstruck, but also probably adopted the weight standard for their bronze issue.

7.2. Reverse: the helmet

The helmet on all coins is the Chalcidian type used in Campania and Lucania with cheek pieces and a neck-guard but without the long piece to protect the nose as on Corinthian helmets¹⁰⁵. The peak on top of the helmet (fig. 3, 1-5 and 7) or the three peaks in the case of the *hemilitron* only (fig. 3, 6) is usually described as ‘*apex*’ in numismatic catalogues. Yet it can be explained thanks to other artefacts and to literary evidence. Especially helpful are findings of helmets¹⁰⁶ and paintings from tomb chambers in southern Italy. One of the best known examples of paintings, which is also chronologically close to our coins is a painting from tomb 12 of the necropolis Andriuolo in Paestum dated to the beginning of the second quarter of the fourth century BC (fig. 10)¹⁰⁷. The fresco shows a scene with a woman preparing a libation in front of a mounted warrior in full armour wearing a helmet decorated with two plumes. These are fixed on peaks, and the one peak visible on our coins could represent the two peaks seen from the side, the one hiding the other¹⁰⁸. Unlike on the coins the helmet on the fresco has a crest.

¹⁰⁴ Boehringer 1998.

¹⁰⁵ Tagliamonte 1984, p. 138. This type of helmet was also used by the Roman army, see Cascarino 2007, p. 44-45 and 122-124.

¹⁰⁶ CASCARINO 2007, p. 50, fig. 2, 25: see esp. the second helmet (found in Paestum) with a triple device similar to the one depicted on the obverse of the *hemilitron* above fig. 3, 6.

¹⁰⁷ Pontrandolfo & Rouveret 1992, 110-111 (fig.), p. 314-316.

¹⁰⁸ See also the painting in the same necropolis Andriuolo tomb 28 (of a boy), Pontrandolfo & Rouveret 1992, p. 158 (fig.), p. 337-338, c. 340/330 BC. Otherwise it would be a central peak.



Fig. 10 – Paestum, necropolis Andriuolo, tomb 12. Beginning of the second quarter of the fourth century BC. Fresco with returning warrior wearing helmet crowned by plumes. (Pontrandolfo & Rouveret 1992, p. 100-101)

However, helmets with feathers and without a crest also occur on Campanian coins of Entella attributable to the third(?) quarter of the fourth century BC (fig. 11)¹⁰⁹. Similar helmets appear at the end of the same century also on a fresco from the necropolis at Nola in the territory of modern Cimitile in a tomb discovered in the mid eighteenth century and documented for Lord Hamilton in 1778 (tomb Weege XXX, fig. 12-13)¹¹⁰. From this and many other depictions (e.g. fig. 10) it is clear that two feathers is the standard number. There are also examples with multiple plumes such as the five on the central figure on the fresco from Nola and on a ‘bail-amphora’ of the Campanian painter Louvre 491 active in the period around 360-340 BC (fig. 14)¹¹¹. Both figures are very similar and wear a tunic, not a cuirass like the other warriors; they also wear a belt, and are equipped with a lance and with a shield decorated with stars.



¹⁰⁹ Gàbrici, p. 129, n° 6; Garraffo 1978, 30, n° 5; Calciati 1983, p. 319, n°s 7-8.

¹¹⁰ Jenkins 1996; Graells i Fabregat 2012, § 205-212, figs 62-63.

¹¹¹ Trendall 1973, pl. 34, 2.

Fig. 11 – *Campani* of Entella, bronze coin third(?) quarter fourth century BC.
 Obv.: ENTE-ΛΛ-AΣ, head of warrior r. wearing helmet with plume; Rev. horse cantering r., below fulmen.
 London, British Museum, ex collection John Morcom, ex Spink, Auction 9 July 1996, n° 17, 6.42 g. Scale 1:1.
 (British Museum)

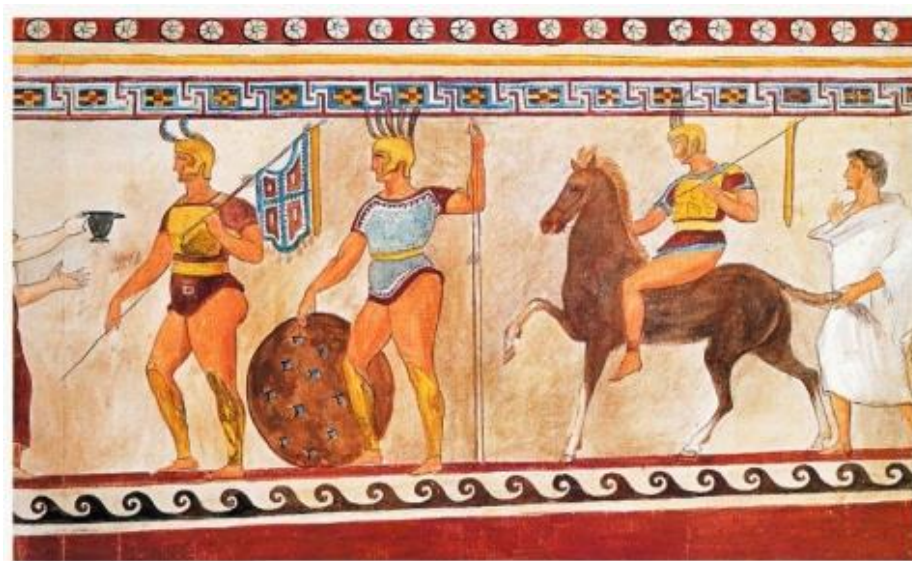


Fig. 12 – Nola, tomb Weege XXX. Late fourth century BC. Fresco with warriors wearing helmets crowned by plumes. Gouache, possibly by P. Fabris, sent by Lord W. Hamilton in 1778 to the Society of Antiquaries; lateral procession (plaque 9363). *Tomba del Guerriero* of the collection Carafa di Noja.
 (Jenkins 1996; Graells i Fabregat 2012, fig. 63, 1; <https://mefra.revues.org/870>)



Fig. 13 – Nola, tomb Weege XXX. Late fourth century BC. Detail from plaque 9363.
 (Graells i Fabregat 2012, fig. 63, 2; <https://mefra.revues.org/870>)



Fig. 14 – Bail-amphora of the Painter Louvre K491, an early Campanian red-figure vase-painter working in Capua; c. 360-340 BC.
(Graells i Fabregat 2012, fig. 65; <https://mefra.revues.org/870>)

On the *hemilitron* (fig. 3, 6) a device to fix three feathers is shown, and a helmet decorated with three feathers was engraved on one of the bronze inscriptions from Entella (fig. 15)¹¹², dated to the period of the First Punic War according to the current consensus¹¹³. It is a key document for the city of Entella, a proxeny decree for a Tiberius Claudius, son of Gaius, ‘Antiatas’ to be displayed in the *bouleuterion* of Entella, and therefore the helmet as an emblem is of particular importance. This is highlighted by the central place of the helmet in the table’s upper part shaped in the form of a pediment, where it splits the three first lines of the inscription into two parts.

¹¹² *SEG* XXX, 1980, n° 1120; XXXII, 1982, n° 914; XL, 1990, n° 785 = Nenci 1993, p. 40-41 (labelled ‘decreto IV’); Porciani 2001, p. 18-19. For the most thorough discussion see Ampolo 2001, XI-XIII with bibliography XV-XVI (labelled ‘decreto B1’).

¹¹³ Ampolo 2001, p. XI-XIII argues for a date between 254 and 241 BC with a preference for 249 BC.

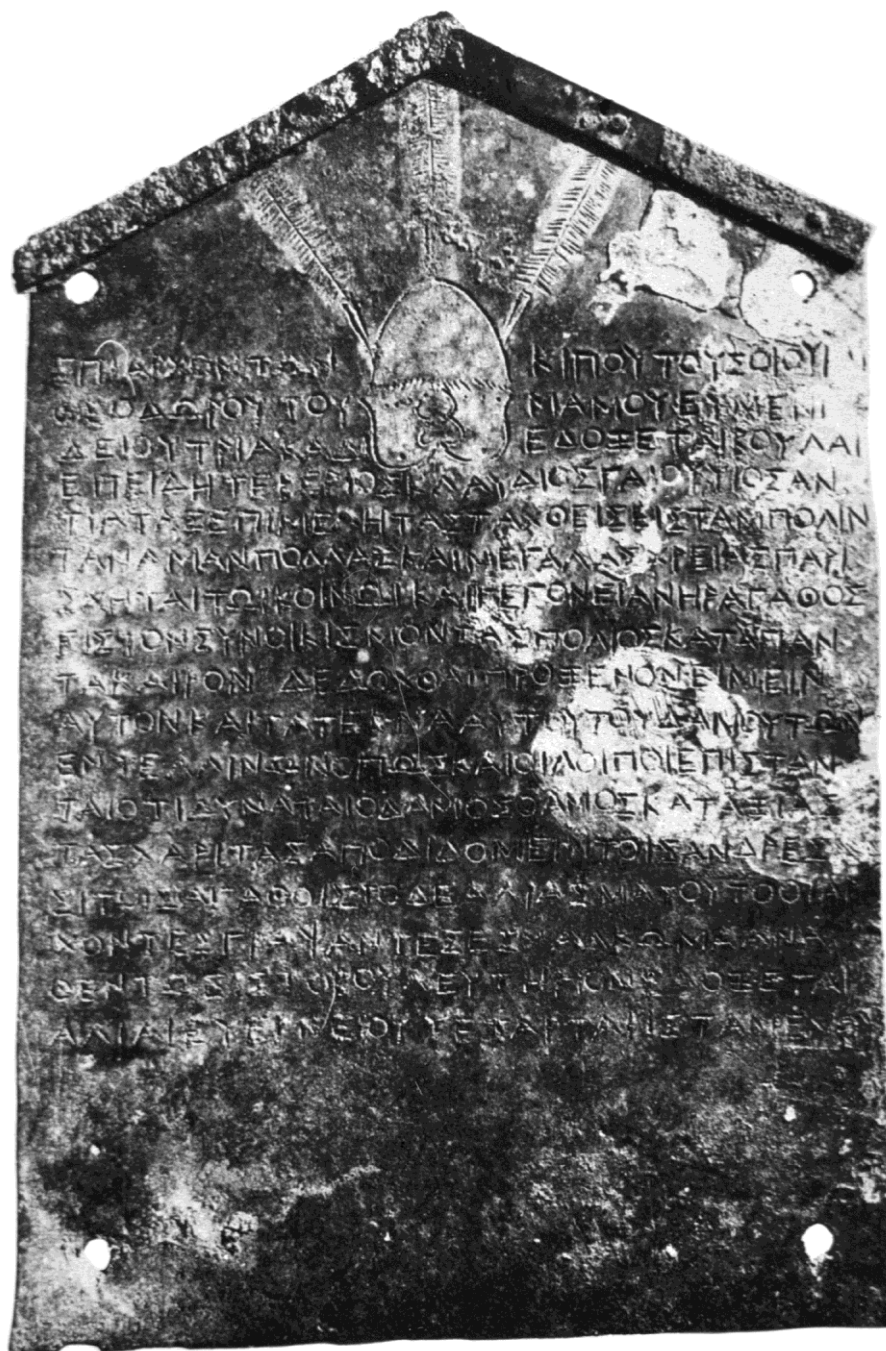


Fig. 15 – Bronze tablet B1 (Nenci IV) from Entella, c. 254-241 (?) BC.
 (Laboratorio di Storia, Archeologia, Epigrafia, Tradizione dell'antico, Scuola Normale Superiore di Pisa)

The feature of triple feathers is later echoed in Polybius (6.23.12-13), in a passage where he describes the terrifying effect on enemies of warriors crowned by plumes because they make them appear taller:

ἐπὶ δὲ πᾶσι τούτοις προσεπικοσμοῦνται περίνῳ στεφάνῳ καὶ περοῖς φοινικοῖς ἢ μέλασιν ὀρθοῖς τρισίν, ὥς πηχυαίοις τὸ μέγεθος, ὧν προστεθέντων κατὰ κορυφὴν ἅμα τοῖς ἄλλοις ὅπλοις ὁ μὲν ἀνὴρ φαίνεται διπλάσιος ἑαυτοῦ κατὰ τὸ μέγεθος, ἢ δ' ὄψις καλὴ καὶ καταπληκτικὴ τοῖς ἐναντίοις.

‘Finally they wear as an ornament a circle of feathers with three upright purple or black feathers about a cubit in height, the addition of which on the head surmounting their other arms is to make every man look twice his real height, and to give him a fine appearance, such as will strike terror into the enemy.’

After the appearance of the first Campanian issues discussed in this paper, both the horse and the helmet continue to be used on bronze coins issued by Entella's Campanians throughout the fourth century BC¹¹⁴ and both relate to the Campanians as mercenaries involved in warfare. The horse derives from the gold coins of Dionysius, the tyrant under whom the Campanians served but who also dispensed with their services in 404 BC. It was almost immediately adopted by the Carthaginians for their tetradrachms of the later part of the QRTHDŠT series. As for the latter, Jenkins has pointed out that the obverse die O12 (where the horse appears with a double-lined exergue line without legend) is linked to seven reverses and that this proportion was only paralleled by the high number of reverse dies linked to the obverse O3 of the issue with the forepart of the horse and some issues of Himera and Agrigentum¹¹⁵. He described the Punic O3 and O12 issues as a sign of ‘intensive though spasmodic minting’, corroborated by the recutting or remodelling of the same two dies (O3’ and O12’) and three more (O6’, O7’ and O11’). We have seen that Jenkins at the time interpreted the start of the whole series beginning with the issue with the forepart of the horse as linked to the conflicts between Greeks and Carthaginians preceding the war in 409 BC. The output of O3 could be related to these preparations in 410 BC, if not to the year 409/408 BC when Selinus (Diodorus 13.57-59.4) and Himera (Diodorus 13.59.4-62) were destroyed. At that stage the Syracusan gold coins had not been studied, and he did not comment on the historical impact of the output related to O12. I cannot avoid the conclusion that this issue was linked to the events leading to the destruction of Gela in 405 BC (Diodorus 13.108.2-111.2) and Camarina in 405 BC (Diodorus 13.108.3), put into relation with Dionysius’ gold coinage as an emergency coinage already by Bérend¹¹⁶.

Given this background, the choice of the horse by the Campanians for their own coinage can be understood not simply as a choice by warriors and cavalrymen, but also as highly symbolic. When they started their coinage around 401/400 BC, not long after having taken possession of the city of Entella, dispatched by Dionysius and settled in Carthaginian territory, the horse was a symbol fitting the propaganda of both antagonists with whom they had every interest to be on the best possible terms. At the same time they displayed on their coins the two legends ENTEΛΛΑΣ / KAMPIANΩΝ, a strong assertion of their own power as a special ethnos in Sicily. ENTEΛΛΑΣ is next to the horse just as are ΣΥΡΑΚΟΣΙΩΝ and

¹¹⁴ Gàbrici 1927, p. 128-129, n^{os} 1-7; Garraffo 1978, p. 30-31, n^{os} 4-5, 7, 9; Garraffo 1988-1989, p. 195-196, n^{os} B2, C1b, C3.

¹¹⁵ Jenkins 1971, 26-27.

¹¹⁶ Bérend 1993, 107-108 (with a slightly earlier starting date for the gold issues, 404 BC). The structure of the coinage points indeed to an intense production with signs of urgency, see esp. p. 112-113 the diagrams of the 20 drachm (100 *litrai*) and of the 10 drachm (50 *litrai*) pieces; obverse D4 of the latter is not only linked to R4 and R5, but also to the earlier dies R2 and R3, which were reused; moreover, several dies were used in a broken state.

QRTHDŠT. KAMPIANQN appears next to the helmet which seems to be a strong sign of identity for the Campanians' warriors since it still appears on an official document at the time of the First Punic War.

It may be added that the excavations on the Rocca d'Entella have provided evidence for the presence of Italian individuals. Thus in 2001 a tomb of a 25-30 year old man with an Italian belt in bronze and a spearhead in iron was discovered in necropolis A (tomb 149)¹¹⁷. The tomb is dated by the pottery (a *lekythos strigilatus*, a bowl and a *kylix*, all black glazed, and two unglazed *olpai*) to the late fifth / early fourth century BC, and it contained also a *strigilis* in bronze¹¹⁸. The latter element is common in male burials in central and southern Italy and as an element referring to the sphere of the *palaestra* it expresses the local elite's ambition to adopt Greek ideals of athleticism¹¹⁹. The man also wore a bronze ring with the depiction of a figure holding a shield with his right hand and raising his left as in the act of attacking an enemy. From analyses of the bones changes were identified that point to intense training with the javelin, and the data point also to equestrian activity¹²⁰. Immediately south of that tomb a female burial (tomb 150) was excavated and, thanks to a black glazed *lekythos* found there, dated to the second quarter of the fourth century BC at the latest¹²¹. The 40-50 year old woman was likewise buried with objects of Italian origin, namely three iron fibulae with coral inlays¹²².

This is interesting evidence attesting to a local population, both male and female, buried with an Italian outfit¹²³, thus complementing the information from the literary sources shaped by the *topos* of the (Campanian) male occupiers murdering the indigenous men and taking their wives (Diodorus 14.9.8-9)¹²⁴. Although we cannot strictly exclude that the woman was Sicilian wearing Italian fibulae, there is a chance that she was actually Italian. Both individuals might thus have belonged to the first or second generation of Italian settlers of Entella.

¹¹⁷ Di Noto & Guglielmino 2002, p. 527-529; Guglielmino 2006, p. 503-504 and p. 507-509.

¹¹⁸ Di Noto & Guglielmino 2002, p. 528; Guglielmino 2006, p. 504 and 507-509.

¹¹⁹ Sannibale 1995, p. 975, with examples in note 18; Di Noto & Guglielmino 2002, p. 528.

¹²⁰ Fabbri 2006, esp. p. 517-519; Guglielmino 2006, p. 507-508.

¹²¹ Di Noto & Guglielmino 2002, p. 529; Guglielmino 2006, p. 508-509. The tomb included also a coin, placed in the woman's right hand, a *hemilitron* of Agrigentum with two countermarks (head of Heracles r., 14 mm on the obv. and *pecten*, c. 7.5 mm on the rev.), for its date Frey-Kupper 2002, p. 542-544 and 550, n° 20.

¹²² Guglielmino 2006, p. 508 mentions parallels namely from Paestan tombs.

¹²³ On the problem of attributing archaeological objects to specific ethnic groups in Italy see Nowak 2014, esp. p. 33 and 93-95. While it is correct that many of the ethnic labels arise from concepts of ancient historiographers and as such cannot be applied to material culture (e.g. to belts), her view that the *kampanoi* mentioned in the literary sources for Entella and on the city's coinage do not necessarily link to Campanians (Nowak 2014, p. 29-30) does not take into account that the ethnic KAMPIANOΣ or varieties of that legend appear on coins produced by a range of Campanian communities in Italy. This coinage was produced around 415-405 BC by shared obverse dies with Cumae and Neapolis in a central mint, convincingly located at Neapolis by Rutter; see Rutter 1979, p. 81-83, 98-100 and 178-179 (p. 81 especially on the ethnic and p. 83) and *HN² Italy*, p. 64. The fact that these coins are chronologically close to the earliest Campanian coins in Entella (though possibly a few years earlier) is a valid argument that the legend KAMPIANQN on the coins of Entella refers to Campania rather than vaguely to Italy as argued by Nowak. For further Campanian connections in Sicilian numismatics see also Rutter 2009b, p. 30-32, a topic which deserves further research.

¹²⁴ Fantasia 2001a, p. 50: '...secondo un *cliché* di comportamento che la tradizione antica assegna volentieri a Campani e Sanniti...'; Fariselli 2002, p. 196, note 84; Nowak 2014, p. 296.

8. Conclusions and further considerations

Overall, the coin finds from the Rocca d'Entella and coins in collections provide information complementing that from other sources which is in many ways unique:

- A group of Campanians moved to Entella after the destruction of the Chalcidian cities in around 401/400 BC, and they brought coins with them. These were from booty or pay — it is not known whether coins ultimately from ransom money were involved — and were then overstruck. Neither of the coins of Catana found on the Rocca d'Entella (fig. 1) were overstruck and thus may have circulated for a time before they were lost. If all coins brought from the Chalcidian cities were put into circulation in Entella before they were overstruck, these two slipped through the net before the other coins were recalled by the community. Until more evidence is available, it remains uncertain how exactly the process of the overstriking was instigated. All that can be said is that this happened not long after the Campanians took Entella in 404 BC as reported by Diodorus (14.9.8-9).
- This raises the question about the institutional background of the coining. The issue of coins implies a decision based on administrative structures. Yet we have no evidence for these at the beginning. The information from the bronze tablets about the institutional framework in the third century BC is nonetheless interesting since they document a shift from a double archontate (tables A1, A2, A3 and B1) to an eponymous priesthood (tables C1, C2 and C3), the former based on Italian structures with two supreme magistrates with eponymous function and the latter on Sicilian-Hellenistic institutional structures with an eponymous *hieromnemon*¹²⁵. This makes an organisation based on Italian structures from an early stage plausible; if the coins which were lost before being overstruck attest in fact a (short) period of circulation as Catanian coins, this may reflect a timespan of decision taking by the newly settled members of the community which may have been very short, perhaps simply before the first council was set up and able to deliberate. If I am correct in thinking that the hemidrachms and the bronzes were issued separately from the drachms and later than them, it is all the more interesting that they add the city name ΕΝΤΕΛΛΑΣ (gen. sg. 'of Entella') to the ethnic ΚΑΜΠΑΝΩΝ. At this stage the Campanians seem to have chosen to assert their identity as *Campani* of Entella to distinguish themselves from other Campanian communities in Sicily and elsewhere¹²⁶.
- The coins used as flans were drachms and hemidrachms, denominations suddenly issued in large quantities in the last decade of the fifth century for military purposes; in the Chalcidian cities they were especially popular for the needs of war, in Catana and Naxos mainly from 406/405 BC in the context of the conflict with Dionysius. These coins along with drachms and hemidrachms of Rhegium were overstruck in Entella. The quantity (both drachms and hemidrachms produced from two obverse and two reverse dies) cannot have been very large and may have covered the pay of a group of 600 warriors engaged for 100 days.
- In the overall context, the aspect of recycling metal is an interesting point to be raised. Sicily is an island without its own metal resources. Canevaro and Rutter have recently shown that the Syracusans after their victory over the Athenians in 413 BC collected silver coins from their defeated enemies¹²⁷. Thucydides (6.31.3-5) relates that the Athenians took a great amount of money to Sicily, and he refers (7.82.1.3) also to four

¹²⁵ Ampolo 2001b, IX-XI; Fantasia 2001a, p. 62-64.

¹²⁶ For an overview, see Fantasia 2001a.

¹²⁷ Canevaro & Rutter 2014, p. 8-9.

hollow shields which were filled with money taken from some of the Athenian captives in 413 BC. As discussed above, we do not know how the money was obtained from the defeated Chalcidian cities around 401/400 BC. We also do not know what happened to the Athenian coins studied by Canevaro and Rutter; whether they were used as such for payments or melted down to produce new coins. Yet, the principle of recycling coins in both cases is similar.

- As for the production of the Campanian coins the fact that the *Campani* produced also small *hemilitra* and bronze coins, shows that they tried to provide a range of denominations which we may well understand as part of their attempt to equip their community with coins for all aspects of exchange except for those involving amounts above the drachm.
- Bronze coins were not created by overstriking flans but anew from bullion, and probably according to the weight system of Leontini at the end of the coinage produced by the Chalcidian cities. This creation is all the more remarkable since the city of Entella issued bronzes (*hemilitra*) of similar size and function shortly before or around 405 BC (fig. 7, 5-6) which in their turn appear to derive from *hemilitra* of Syracuse (fig. 7, 4-5 issued after the bronzes fig. 7, 1-2) found in substantial quantity on the Rocca d'Entella (fig. 5, 3-7). The issue of the new (Campanian) bronze (fig. 3, 7) thus stands both for a break and for continuity in the monetary history of Entella.
- The analysis of the iconography has also allowed us to test the chronology of the coins independently from the overstrikes. It has led to a discussion of the connections between the iconography of the cantering horse on Dionysius' 10 drachm (50 *litra*) gold pieces and on the Punic tetradrachms of Jenkins's series I. It could be shown that the Punic coins were produced from two obverse dies probably by Greek dies engravers who were aware of developments in the mint of Syracuse. Both coinages result from a frantic and substantial production of coins in the context of the warfare of 405 BC when the cities of Gela and Camarina were destroyed.

The horse type chosen by the Campanians for their coins is inspired by the horses of the Syracusan and Punic antagonists, the main powers in Sicily at the time. It is difficult to know which of the two coinages the Campanians were basing theirs on, though I tend to favour Dionysius. It was he whom they were defending during the revolt in Syracuse as a consequence of the defeat in 405 BC. On the other hand the choice of the horse iconography allowed the Campanians of Entella to express a kind of accommodating neutrality to both political antagonists on whom they were in many ways dependent¹²⁸ and between whom they repeatedly changed sides in the course of the fourth century BC (Diodorus 14.48.4-5; 14.53.5; 14.61.4-6; 15.73.2; 16.67.1-4; 16.73.1-2). At the same time through their coinage, they sought to make a claim as a leading authority and political force. The horse is at the same time a status symbol of the elite group of warriors and *equites* to which probably the warrior buried in tomb 149 from the necropolis A on the Rocca d'Entella belonged. The helmet on their coins was an ethnic symbol (of 'Campanicity') not unlike the palm tree on the Punic tetradrachm, the head of Arethusa on Syracusan coins, of the river gods on the coins of many Sicilian cities, such as on the silver *litrai* struck at Entella in the period before the Campanians took possession of the city.

Overall the two Catanean coins found on the Rocca d'Entella and the coins of the *Campani* of Entella struck over coins of Catana and other mints of the Chalcidic cities in eastern Sicily form an outstanding set of data. However, the literary, epigraphical and archaeological

¹²⁸ Moggi & Gulletta 2001, p. 116.

evidence takes us only so far, as is the case with the activities of Campanian mercenaries described in Diodorus or tomb frescoes illustrating Campanian warriors. On the other hand, the coins provide information absent from all other sources, such as the existence of the group of *Campani* who reached Entella around 401/400 BC, and how they asserted themselves as a people from elsewhere and as a force often decisive in the conflict between the major political protagonists at the time. In addition, the coins raise fundamental questions related to the creation of the Campanian community's institutional framework and to the process of taking decisions; how to equip the city with monetary instruments such as coins and use them as a tool of propaganda.

Bibliography

Ancient authors:

Diodorus Siculus, *Library of History, Books XII.41-XIII*, translated by C.H. OLDFATHER (*Loeb Classical Library* 384), Cambridge, MA and London, 1950.

Diodorus Siculus, *Library of History, Books XIV-XV.19*, translated by C.H. OLDFATHER (*Loeb Classical Library* 399), Cambridge, MA and London, 1954 (repr. 2001).

Diodorus Siculus, *Library of History, Books XXV.20-XVI.65*, translated by Ch.L. SHERMAN (*Loeb Classical Library* 389), Harvard 1952 (repr. 2001).

Diodorus Siculus, *Library of History, Books XVI.66-XVII*, translated by C.B. WELLES (*Loeb Classical Library* 422), Cambridge, MA and London 1963.

Polybius, *Histories, Books 5-8*, translated by W.R. PATON, revised by F.W. WALBANK and Ch. HABICHT (*Loeb Classical Library* 138), Cambridge, MA and London, 2011.

Thucydides, *History of the Peloponnesian War, Books VII-VIII*, translated by C.F. SMITH (*Loeb Classical Library* 169), Cambridge, MA and London, 1935 (repr. 2006).

Abbreviations

BMC Sicily

R.S. POOLE, R.S., *Catalogue of the Greek Coins in the British Museum. Sicily*, London, 1876.

CH

Coin Hoards, Vols I-X, London, 1975-2010.

HN²

B.V. HEAD, *Historia Numorum³. A Manual of Greek Numismatics, New and Enlarged Edition*, Oxford, 1911.

HN³ Italy

N.K. RUTTER, (ed.), *Historia Numorum³. Italy*, London, 2001.

IGCH

M. THOMPSON, O. MØRKHOLM & C. KRAAY, C., *An Inventory of Greek Coin Hoards*, New York, 1973.

SEG

Supplementum Epigraphicum Graecum, Leiden (later Amsterdam and then again Leiden), 1923-

SNG ANS 3

Sylloge Nummorum Graecorum. The Collection of the American Numismatic Society. Part 3. Bruttium – Sicily I: Abacaenum – Eryx, New York, 1975.

SNG Lloyd II

Sylloge Nummorum Graecorum. Vol. II. The Lloyd Collection, London, 1933.

SNG John Morcom

Sylloge Nummorum Graecorum. The British Academy, Volume X. The John Morcom Collection of Western Greek Coins, Oxford, London, 1995.

Secondary sources

Ampolo 2001

C. AMPOLO, Introduzione. Per una riconsiderazione dei decreti di Entella e Nakone. In C. Ampolo (ed.), *Da un'antica città di Sicilia. I decreti di Entella e Nakone. Catalogo della mostra*, Pisa, 2001, p. VII-XVI.

Arnold-Biucchi 1996

C. ARNOLD-BIUCCHI, Riconiazioni siciliane. *NumAntCl* 25, 1996, p. 49-57.

Arnold-Biucchi 2009

C. ARNOLD-BIUCCHI 2009, Miscellanea Himerensia. *SNR* 88, 2009, p. 47-57.

Arnold-Biucchi, Beer Tobey & Waggoner 2009

C. ARNOLD BIUCCHI, L. BEER TOBEY & N.C. WAGGONER, A Greek archaic silver hoard from Selinus. *ANSMN* 33, 1988, p. 1-35.

Bejor 1988

G. BEJOR, 3. L'area 9 (SAS 9). In: AA.VV., *Entella. Riconsezioni topografiche e scavi 1987*. *ANSP*, ser. III, XVIII. 1988, p. 1517-1523.

Beloch 1916

K.J. BELOCH, *Griechische Geschichte*, Bd. II.2, Strassburg, 1916 (2. Auflage).

Beloch 1923

K.J. BELOCH, *Griechische Geschichte*, Bd. III.2, Berlin, Leipzig, 1923 (2. Auflage).

Benassai 2001

R. BENASSAI, *La pittura dei Campani e dei Sanniti, Atlante tematico di topografia antica, IX supplemento*, Roma, 2001.

Bérend 1979

D. BÉREND, Le monnayage de bronze de Ségeste, in Le origini della monetazione di bronzo in Sicilia e in Magna Grecia. In: *Atti del VI convegno del Centro internazionale di studi numismatici. Napoli 17-22 aprile 1977*. *AION* 25, Suppl., Roma, 1979, p. 53-77.

Bérend 1993

D. BÉREND, Le monnayage d'or de Syracuse sous Denys. In: A. STAZIO, M. TALIERCIO & S. CECCOLI (ed.), *La monetazione dell'età dionigiana. Atti dell'VIII Convegno del Centro internazionale di Studi numismatici, Napoli 29 maggio – 1 giugno 1983*, Roma, 1993, p. 91-143.

Boehringer 1978

CH. BOEHRINGER, Bemerkungen zur sizilischen Bronzeprägung im 5. Jahrhundert v. Chr. *SM* 28, p. 49-65.

Boehringer 1979a

Ch. BOEHRINGER, Die frühen Bronzemünzen von Leontinoi und Katane. In: *Le origini della monetazione di bronzo in Sicilia e in Magna Grecia. Atti del VI convegno del Centro*

internazionale di studi numismatici. Napoli 17-22 aprile 1977. AIN 25, Suppl., Roma, 1979, p. 145-176.

Boehringer 1979b

Ch. BOEHRINGER, Ch. 1979b, Zu Finanzpolitik und Münzprägung des Dionysios von Syrakus. In: O. MØRKHOLM & N.M. WAGGONER, (eds), *Greek Numismatics and Archaeology. Essays in Honor of Margaret Thompson*, Wetteren, 1979, p. 8-32.

Boehringer 1998

Ch. BOEHRINGER, Zur Münzgeschichte von Leontinoi in klassischer Zeit. In: R. ASHTON & S. HURTER (eds), *Studies in Greek Numismatics in Honour of Martin Jessop Price*, London, 1998, p. 43-53.

Boehringer 2008

Ch. BOEHRINGER, Über die Münzen von Katane im letzten Jahrzehnt des V. Jahrhunderts v. Chr., *SNR* 87, 2008, p. 5-22.

Boehringer 2016

Ch. BOEHRINGER, Eine schwierige Genese: Le monete delle antiche città di Sicilia von Antonino Salinas', in L. SOLE and S. TUSA (eds), *NOMISMATA. Studi di numismatica offerti ad Aldina Cutroni Tusa per il suo novantatreesimo compleanno*, Ragusa, 2016, p. 77-89.

Boehringer forthcoming

Ch. BOEHRINGER, *Die Münzen von Aitna – Katane in klassischer Zeit*, forthcoming.

Buttrey, Erim, Groves, et al. 1989

T.V. BUTTREY, K.T. ERIM, T.D. GROVES, et al. *The Coins*. Morgantina Studies II, Princeton, 1989.

Boehringer, Brousseau & Vassallo 1989

Ch. BOEHRINGER, L. BROUSSEAU & S. VASSALLO, Monete in tomba: Due tesoretti di argento dalla necropoli occidentale di Himera. *AIN* 107, 2011, p. 9-38.

Cahn 1944

H.A. CAHN, *Die Münzen der sizilischen Stadt Naxos. Ein Beitrag zur Kunstgeschichte des griechischen Westens*. Basler Studien zur Kunstgeschichte 2). Basel, 1944.

Calciati 1983

R. CALCIATI, *Corpus nummorum Siculorum. La monetazione di bronzo*, vol. I, Milano, 1983.

Calciati 1986

R. CALCIATI, *Corpus nummorum Siculorum. La monetazione di bronzo*, vol. II, Milano, 1986.

De Callataÿ 2005

F. DE CALLATAÿ, A Quantitative Survey of Hellenistic Coinages: Recent Achievements. In: Z.H. ARCHIBALD, J.K. DAVIES & V. GABRIELSEN (eds), *Making, Moving and Managing. The New World of Ancient Economies, 323-31 BC*, Oxford, 2005, p. 73-91.

De Callataÿ 2011

F. DE CALLATAÿ, Quantifying monetary supplies in Greco-Roman times: A general frame. In: F. DE CALLATAÿ (ed.), *Quantifying Monetary Supplies in Greco-Roman Times*. Pragmateiai 19, Bari, 2011, p. 7-29.

F. DE CALLATAÿ (ed.), *Quantifying Monetary Supplies in Greco-Roman Times*. Pragmateiai 19, Bari, 2011.

De Callataj 2010

A. CAMPANA, Sicilia: Kampanoi di Entella (410-408 a.C.). In: A. CAMPANA (ed.), *Καμπάνος. Centro di Studi Storici Saturnia. Associazione Culturale Italia Numismatica. Contributi alla conoscenza della Storia, Archeologia, Numismatica e Vita quotidiana dei popoli dell'Italia antica*, II – *Campani*, Cassino, 2010, p. 57-88.

Canevaro & Rutter 2014

M. CANEVARO & N.K. RUTTER, Silver for Syracuse: The Athenian defeat and the period of the 'Signing Artists. *SNR* 93, 2014, p. 5-20.

Carbè 1993

A. CARBÈ, Circolazione monetale a Gela. I rinvenimenti negli scavi dell'ex scalo ferroviario (1984-85, 1987). In: *Quaderni dell'Istituto de Archeologia della Facoltà di Lettere e Filosofia dell'Università di Messina* 8, 1993, p. 51-59.

Cascarino 2007

G. CASCARINO, *Esercito romano. Armamento e organizzazione*, vol. 1, Rimini, 2007.

Cavallaro 1956

G. CAVALLARO, Entella elimica e le sue monete. In: *AION* 3, 1956, p. 39-42.

De Vido 1993

S. DE VIDO, Fonti numismatiche. In: G. NENCI (ed.), *Alla ricerca di Entella*, Pisa, 1993, p. 27-33.

Di Noto & Guglielmino 2002

A. DI NOTO & R. GUGLIELEMINO, Necropoli. Le Campagne del 2001 e del 2003. In: *ASNP*, ser. IV, 2003, p. 525-532.

Fabbri 2006

P.F. FABBRI, Appendice. Gli scheletri da due tombe della necropoli A di Entella. In: C. MICHELINI, (ed.), *Guerra e pace in Sicilia e nel Mediterraneo antico, 8-3 sec. a. C. Arte, prassi e teoria della pace e della guerra. Atti delle quinte giornate internazionali di studi sull'area elima, Erice 12-15 ottobre 2003*, vol. II, Pisa, 2006, p. 515-520.

Facella 1999

A. FACELLA, Il luogo di rinvenimento del cosiddetto ripostiglio di *Contessa Entellina (IGCH nr. 2119)*. *SicA XXXII*, fasc. 97, 1999, 165-168.

Fantasia 2001a

U. FANTASIA, I mercenari italici in Sicilia. In: C. AMPOLO (ed.), *Da un'antica città di Sicilia. I decreti di Entella e Nakone. Catalogo della mostra*, Pisa, 2001, p. 49-58.

Fantasia 2001b

U. FANTASIA, Le istituzioni. In: C. AMPOLO (ed.), *Da un'antica città di Sicilia. I decreti di Entella e Nakone. Catalogo della mostra*, Pisa, 2001, p. 59-68.

Fariselli 2002

A.C. FARISELLI, *I mercenari di Cartagine. Biblioteca della Rivista di Studi Punici* 1, La Spezia, 2002.

Fischer-Bossert 1998

W. FISCHER-BOSSERT, Nachahmungen und Umbildungen in der sizilischen Münzprägung. *SNR* 77, 1998, p. 25-39.

Fischer-Bossert 2012

W. FISCHER-BOSSERT, The Coinage of Sicily. In: W. METCALF (ed.), *The Oxford Handbook of Greek and Roman Coinage*, Oxford, 2012, p. 142-156.

Frey-Kupper 2002

S. FREY-KUPPER, I ritrovamenti monetali dalle campagne di scavo 2000, 2001 e 2003 e dalle ricognizioni nel territorio. In: *ASNP*, ser. IV, 2002, p. 540-554.

Frey-Kupper 2013

S. FREY-KUPPER, *Die antiken Fundmünzen vom Monte Iato 1971-1991. Ein Beitrag zur Geldgeschichte Westsiziliens*. Studia Ietina X, Lausanne, 2013.

Frey-Kupper 2014

S. FREY-KUPPER, Coins and their use in the Punic Mediterranean. Case studies from Carthage to Italy (fourth to first century BC). In: J. CRAWLEY QUINN & N. VELLA (ed.), *The Punic Mediterranean Identities and Identification from Phoenician Settlement to Roman Rule*, (*British School at Rome Studies*), Cambridge, 2014, p. 76-110.

Frey-Kupper 2016a

S. FREY-KUPPER, Due monete di Katane da Rocca d'Entella e la prima monetazione dei Campani entellini. In: L. SOLE & S. TUSA, *NOMISMATA. Studi di numismatica offerti ad Aldina Cutroni Tusa per il suo novantatreesimo compleanno*, Ragusa, 2016, p. 194-222.

Frey-Kupper 2016b

FREY-KUPPER, S. 2016, Le monete antiche. In: F. SPATAFORA (ed.), *Il thesmophorion di Entella, Scavi in Contrada Petraro*, Pisa, 2016, p. 285-293.

Frey-Kupper & Stannard forthcoming (2017)

S. FREY-KUPPER & C. STANNARD, Evidence for the importation and monetary use of blocks of foreign and obsolete coins in the ancient world, In: B. WOYTEK (ed.), *Infrastructure and Distribution in Ancient Economies*. Denkschriften der philosophisch-historischen Klasse der Österreichischen Akademie der Wissenschaften. Vienna, forthcoming (2017).

Frey-Kupper & Weiss 2010

S. FREY-KUPPER & Ch. WEISS, Entella. I ritrovamenti monetali antichi e medievali scoperti nelle aree del palazzo fortificato (SAS 1) e del Pizzo della Regina (2007-08), in *Relazioni preliminari degli scavi a Segesta (Calatafimi-Segesta, TP; 2007-08), Entella (Contessa Entellina, PA; 2007-08), Kaulonia (Monasterace, RC; 2006-08)*. Ricerche recenti a Roca (Melendugno, LE) (Notizie degli Scavi di Antichità comunicate dalla Scuola Normale Superiore di Pisa. Rassegna Archeologica del LSATMA. In: *ASNP*, ser. V, 2/2, supplemento, 2010, p. 91-100.

Gàbrici 1927

E. GÀBRICI, *La monetazione del bronzo nell Sicilia antica*, Palermo, 1927.

Garraffo 1978

S. GARRAFFO, Storia e monetazione di Entella nel quarto secolo a. C., cronologia e significato delle emissioni dei KAMPIANOI. In *AIIN* 25, p. 23-43.

Garraffo 1984

S. GARRAFFO, Le riconiazioni in Magne Grecia e in Sicilia. Emissioni argentee dal VI al IV secolo a. C. *Studi e materiali di archeologia greca* 2, Palermo, 1984.

Garraffo 1988-1989

S. GARRAFFO, La monetazione dei centri elimi sotto il dominio campano, in *Gli Elimi e l'area elima fino all'inizio della prima guerra punica*. Atti del seminario di studi, Palermo – Contessa Entellina 1989. In: *Archivio Storico Siciliano*, ser. IV 14-15, 1988-1989, p. 193-201.

Graells i Fabregat 2012

R. GRAELLS I FABREGAT, *Corazas cortas «Campanas» con detalle anatómico esquemático*, «MEFRA» [En ligne], 124-2 | 2012, (<http://mefra.revues.org/870> Corazas cortas «Campanas» con detalle anatómico esquemático, accessed 29 June 2016).

Grose 1916

S.W. GROSE, Some rare coins of Magna Graecia, *NC* 16, 1916, p. 201-245.

Grose 1923

S.W. GROSE, *Catalogue of the McClean Collection of Greek Coins*, vol. I, Cambridge, 1923.

Guglielmino 2006

R. GUGLIELMINO, Corredi tombali di tipo italica da Entella. In: C. MICHELINI, (ed.), *Guerra e pace in Sicilia e nel Mediterraneo antico, 8-3 sec. a. C. Arte, prassi e teoria della pace e della guerra. Atti delle quinte giornate internazionali di studi sull'area elima, Erice 12-15 ottobre 2003*, vol. II, Pisa, 2006, p. 503-513.

Helas 2011

S. HELAS *Selinus II. Die punische Stadt auf der Akropolis*. Sonderschriften, Deutsches Archäologisches Institut Rom 15, Wiesbaden, 2011.

Herzfelder 1957

H. HERZFELDER, *Les Monnaies d'argent de Rhégion frappées entre 464 et le milieu du IV^e siècle av J.-C.*, Paris, 1957.

Holloway 1974-1975

R. HOLLOWAY, La struttura delle emissioni di Siracusa nel periodo dei “signierende Künstler”. *AIIN* 75, 1974-1975, p. 41-48.

Jenkins 1996

I.D. JENKINS, *Nuovi documenti per l'origine della Tomba «da Paestum» della Collezione Carafa di Noja*, in S. DE CARO & M. BORRIELLO (ed.), *I Greci in Occidente, La Magna Grecia nelle collezioni del Museo Archeologico Nazionale di Napoli*, Napoli, 1996, p. 249-251.

Jenkins 1971

G.K. JENKINS, Coins of Punic Sicily I, *SNR* 50, 1971, p. 24-78 (see also G.K. JENKINS, *Coins of Punic Sicily. Reprint after the Schweizerische Numismatische Rundschau*, Zürich, 1997).

Kraay 1976

C.M. KRAAY, *Archaic and Classical Greek Coins*, London, 1976.

Kroll 1993

J. KROLL, *The Greek Coins. The Athenian Agora XXVI*, Princeton, New Jersey, 1993.

Lee 2000

I. LEE, Entella: The silver coinage of the Campanian mercenaries and the site of the first Carthaginian mint 410-409 BC. In: *NC* 160, 2000, p. 1-66.

Libero Mangieri 2006

G. LIBERO MANGIERI, La monetazione di Poseidonia-Paestum e Velia nella collezione Sallusto. *BdN*, 46-47, 2006, p. 3-289.

Loomis 1998

W.T. LOOMIS, *Wages, Welfare Costs and Inflation in Classical Athens*, Ann Arbor, 1998.

Mammina 2002

G. MAMMINA, Le presenze monetarie. In: M.L. FAMÀ (ed.), *Mozia. Gli scavi nella «Zona A» dell'abitato*. Collana di archeologia del Centro Internazionale di Studi Fenici, Punici e Romani, Comune di Marsala 1, Bari, 2002, p. 341-351.

Manganaro 1999

G. MANGANARO, Ancora sul mikron kerma siceliota. *RBN* 145, 1999, p. 61-68.

Meadows 2009

A. MEADOWS, Money in an ideal world: Plato's Laws and the dual nature of coinage. In: S. DROUGOU (ed.), *ΚΕΡΜΑΤΙΑ ΦΙΛΙΑΣ. Τιμητικός τόμος για τον Ιωάννη Τουράτσογλου*, Athens, 2009, 25-31.

Mertens 2006

D. MERTENS, *Städte und Bauten der Westgriechen*, München, 2006.

Moggi & Gulletta 2001

M. MOGGI & M.I. GULLETTA, Entella e le «vie delle città». Orizzonti politici e topografici. In: C. Ampolo (ed.), *Da un'antica città di Sicilia. I decreti di Entella e Nakone. Catalogo della mostra*, Pisa, 2001, p. 115-121.

Nenci 1993

G. NENCI, Fonti epigraphiche. In: G. NENCI (ed.), *Alla ricerca di Entella*, Pisa, 1993, p. 35-50.

Nowak 2014

Ch. NOWAK, *Bestattungsrituale in Unteritalien vom 5. bis 4. Jh. v. Chr.: Überlegungen zur sogenannten Samnitisierung Kampaniens*, Wiesbaden, 2014.

Parise 1971

N. PARISE, Oboli e litre nelle emissioni arcaiche d'Imera, di Zancle e di Nasso. In: *La monetazione arcaica di Himera fino al 472 a.C. Atti del II Convegno del Centro Internazionale di Studi Numismatici, Napoli, 15-19 aprile 1969 (AIIN 16-17, Suppl.)*, Rome, 1971, p. 15-20.

Pontrandolfo & Rouveret 1992

A. PONTRANDOLFO & A. ROUVERET, *Le tombe dipinte di Paestum*, Modena, 1992.

Porciani 2001

L. PORCIANI, I decreti: Testo e traduzione. In: C. AMPOLO (ed.), *Da un'antica città di Sicilia. I decreti di Entella e Nakone. Catalogo della mostra*, Pisa, 2001, p. 11-31.

Puglisi 2009

M. PUGLISI, *La Sicilia da Dionisio a Estto Pompeo. Circolazione e funzione della moneta*. Pelorias 16, Messina, 2009.

Romao 1864

G. ROMANO, Nacona e i Campani in Sicilia. *Annali dell'Istituto di Corrispondenza Archeologica* XXXVI, 1864, p. 55-67.

Rutter 1979a

N.K. RUTTER, South Italy and Messina. In: *Le origini della monetazione del bronzo in Sicilia e in Magna Grecia. Atti del VI Convegno del Centro Internazionale di Studi Numismatici, Napoli, 17-11 aprile 1977*. AIIN 25, Suppl., Rome, 1979, p. 193-223.

Rutter 1979b

N.K. RUTTER *Campanian Coinages, 475-380 BC*, Edinburgh, 1979.

Rutter 2009a

N.K. RUTTER, Dating the period of the “Signing Artists” of Sicilian coinage, in D.B. COUNTS & A.S. TUCK, (eds), *Koine: Mediterranean Studies in Honor of R. Ross Holloway*. Joukowsky Institute Publication 1, Oxford & Oakville, 2012, p. 125-130.

Rutter 2009b

N.K. RUTTER, Segesta, hybrid issues and the question of a central mint, *SNR* 88, 2009, p. 25-39.

Rutter 2012

N.K. RUTTER, Artistic identity: the case of the “Signing Artists” in Sicily, *NumAntCl* 41, 2012, p. 71-89.

Salinas 1867

A. SALINAS, *Le monete delle antiche città di Sicilia descritte e illustrate*, Palermo, 1867.

Sannibale 1995

M. SANNIBALE, *Cinturoni italici della collezione Gorga*. In *MEFRA* CVII, 1995, p. 937-1020.

Silver 2006

M. SILVER, Slaves versus Free Hired Workers in Ancient Greece, *Historia* 55/3, 2006, p. 257-263.

Sole 2012

L. SOLE, *Gli indigini e la moneta. Rinveimenti monetali e associazioni contestuali dai centri dell'entroterra siciliano*, Caltanissetta & Rome, 2012.

Tagliamonte 1994

G. TAGLIAMONTE, *I figli di Marte. Mobilità mercenari e mercenariato italici in Magna Grecia e Sicilia*, Roma, 1994.

Trendall 1973

A.D. TRENDALL, *The Red-Figured Vases of Lucania, Campania and Sicily, Second Supplement*, London, 1973.

Tudeer 1913

L.O. TUDEER, Die Tetradrachmenprägung von Syrakus in der Periode der signierenden Künstler, *ZfN* 39, 1913.

Tudeer & Fischer-Bossert forthcoming

L. TUDEER & W. FISCHER-BOSSERT, *The Signing Artists' Series of Syracuse*, New York, forthcoming.

Tusa Cutroni 1956

A. TUSA CUTRONI, Il medagliere del Museo nazionale di Palermo, *AIIN* 3, 1956, p. 208.

Tusa Cutroni 1970

A. TUSA CUTRONI, I KAMPIANOI ed i TYPPHNOI in Sicilia attraverso la documentazione numismatica. *Kokalos* 16, 1970, p. 250-267.

Tusa Cutroni 1976

A. TUSA CUTRONI, Le monete. In: N. ALLEGRO, O. BELVEDERE, N. BONACASA *et al.*, *Himera II. Campagne di scavo 1966-1973*, Rome, 1976 p. 703-780.

Tusa Cutroni 2001

A. TUSA CUTRONI, Entella, il ripostiglio IGCH 2119 e al prima zecca di Cartagine in Sicilia. *SicA* XXXIV, fasc. 99, 2001, 184-189.

Westermarck & Jenkins 1980

U. WESTERMARK K. JENKINS, *The Coinage of Kamarina*. Royal Numismatic Society. Special Publication 9, London, 1980.